

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 10, 2002, 11:19:49 ; Search time 12.48 Seconds
(Without alignments)
73.929 Million cell updates/sec

Title: US-09-252-828A-2

Sequence: 1 SWFPVQGFADICCCCKNGDC.....TPSHSRQPHVMSQMSRSVS 41

Scoring table: BIOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 212252 seqs, 22503292 residues

Total number of hits satisfying chosen parameters: 212252

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/1aa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	235	97.1	424	1	US-08-453-472-7 Sequence 7, Appl
2	235	97.1	424	1	US-08-038-948-4 Sequence 4, Appl
3	235	97.1	424	1	US-08-453-952-7 Sequence 7, Appl
4	235	97.1	424	2	US-08-862-903-7 Sequence 7, Appl
5	235	97.1	424	2	US-08-484-158B-61 Sequence 61, Appl
6	226	93.4	223	2	US-08-484-993B-49 Sequence 49, Appl
7	226	93.4	223	2	US-08-484-158B-49 Sequence 49, Appl
8	226	93.4	223	2	US-08-484-596A-49 Sequence 49, Appl
9	226	93.4	223	2	US-08-480-150A-49 Sequence 49, Appl
10	226	93.4	223	3	US-08-458-731-49 Sequence 49, Appl
11	226	93.4	223	3	US-08-149-223A-49 Sequence 49, Appl
12	151	62.4	426	2	US-08-484-993B-12 Sequence 12, Appl
13	151	62.4	426	2	US-08-484-158B-12 Sequence 12, Appl
14	151	62.4	426	2	US-08-484-596A-12 Sequence 12, Appl
15	151	62.4	426	2	US-08-480-150A-12 Sequence 12, Appl
16	151	62.4	426	3	US-08-458-731-12 Sequence 12, Appl
17	151	62.4	426	3	US-08-149-223A-12 Sequence 12, Appl
18	136	56.2	424	2	US-08-484-993B-18 Sequence 18, Appl
19	136	56.2	424	2	US-08-484-158B-18 Sequence 18, Appl
20	136	56.2	424	2	US-08-484-596A-18 Sequence 18, Appl
21	136	56.2	424	2	US-08-480-150A-18 Sequence 18, Appl
22	136	56.2	424	3	US-08-458-731-18 Sequence 18, Appl
23	136	56.2	424	3	US-08-149-223A-18 Sequence 18, Appl
24	126	52.1	424	1	US-08-453-472-8 Sequence 8, Appl
25	126	52.1	424	1	US-08-038-948-2 Sequence 2, Appl
26	126	52.1	424	1	US-08-038-948-5 Sequence 5, Appl
27	126	52.1	424	1	US-08-453-952-8 Sequence 8, Appl

28	126	52.1	424	2	US-08-862-903-8	Sequence 8, Appl
29	119	49.2	421	2	US-08-484-993B-6	Sequence 6, Appl
30	119	49.2	421	2	US-08-484-158B-6	Sequence 6, Appl
31	119	49.2	421	2	US-08-484-596A-6	Sequence 6, Appl
32	119	49.2	421	2	US-08-480-150A-6	Sequence 6, Appl
33	119	49.2	421	3	US-08-458-731-6	Sequence 6, Appl
34	119	49.2	421	3	US-08-149-223A-6	Sequence 6, Appl
35	109	45.0	421	2	US-08-484-993B-24	Sequence 24, Appl
36	109	45.0	421	2	US-08-484-158B-24	Sequence 24, Appl
37	109	45.0	421	2	US-08-484-596A-24	Sequence 24, Appl
38	109	45.0	421	2	US-08-480-150A-24	Sequence 24, Appl
39	109	45.0	421	3	US-08-458-731-24	Sequence 24, Appl
40	109	45.0	421	3	US-08-149-223A-24	Sequence 24, Appl
41	100	41.3	415	2	US-08-484-158B-8	Sequence 8, Appl
42	100	41.3	415	2	US-08-484-993B-8	Sequence 8, Appl
43	100	41.3	415	2	US-08-484-596A-8	Sequence 8, Appl
44	100	41.3	415	2	US-08-480-150A-8	Sequence 8, Appl
45	100	41.3	415	3	US-08-458-731-8	Sequence 8, Appl

ALIGNMENTS

RESULT 1
US-08-453-472-7
Sequence 7, Application US/08453472
Patent No. 6626846
GENERAL INFORMATION:
APPLICANT: DEAN, JURRIEN
TITLE OF INVENTION: CONTRACEPTIVE VACCINE
TITLE OF INVENTION: BASED ON ALLOIMUNIZATION WITH ZONA PELLUCIDA
TITLE OF INVENTION: POLYPEPTIDES
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/453,472
FILING DATE: 30-MAY-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: DOROTHY R. AUTH
REGISTRATION NUMBER: 36,434
REFERENCE/DOCKET NUMBER: 2026-4032 US3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 424
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: unknown
MOLECULE TYPE: protein

ORIGINAL SOURCE:
ORGANISM: human
STRAIN:
INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
HAPLOTYPE:
TISSUE TYPE:
CELL TYPE:
CELL LINE:
ORGANELLE:
FEATURE:
NAME/KEY: ZP3
LOCATION:
IDENTIFICATION METHOD:
OTHER INFORMATION: human ZP3 protein
US-08-453-472-7

Query Match 97.1%; Score 235; DB 1; Length 424;
Best Local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWFVGGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
DB 308 SWFVGGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 348

RESULT 2

US-08-038-948-4

Sequence 4, Application US/08038948

Patent No. 5672488

GENERAL INFORMATION:

APPLICANT: DEAN, JURRIEN
TITLE OF INVENTION: CONTRACEPTIVE VACCINE BASED ON
TITLE OF INVENTION: ALLOIMMUNIZATION WITH ZONA PELLUCIDA POLYPEPTIDES
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:

ADDRESS: CUSHMAN, DARBY & CUSHMAN
STREET: 1100 New York Avenue, N.W.
CITY: Washington
STATE: D.C.
COUNTRY: U.S.
ZIP: 20005-3918

COMPUTER READABLE FORM:

MEDIUM TYPE: FLOPPY disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/038,948

FILING DATE: 26-MAR-1993

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/930,462

FILING DATE: 20-AUG-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/364,379

FILING DATE: 12-JUN-1989

ATTORNEY/AGENT INFORMATION:

NAME: SCOTT, Watson T.

REGISTRATION NUMBER: 26,581

REFERENCE/DOCKET NUMBER: 99152/E-266-88/2

TELECOMMUNICATION INFORMATION:

TELEPHONE: (202) 861-3000

TELEFAX: (202) 822-0944

TELEX: 6714627 CUSH

INFORMATION FOR SEQ ID NO: 4:

SEQUENCE CHARACTERISTICS:

LENGTH: 424 amino acids

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-038-948-4

Query Match 97.1%; Score 235; DB 1; Length 424;
Best Local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWFVGGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
DB 308 SWFVGGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 348

RESULT 3

US-08-453-952-7

Sequence 7, Application US/08453952

Patent No. 5672488

GENERAL INFORMATION:

APPLICANT: DEAN, JURRIEN

TITLE OF INVENTION: CONTRACEPTIVE VACCINE

TITLE OF INVENTION: BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA

NUMBER OF SEQUENCES: 12

CORRESPONDENCE ADDRESS:

ADDRESS: MORGAN & FINNEGAN

STREET: 345 PARK AVENUE

CITY: NEW YORK

STATE: NEW YORK

COUNTRY: USA

ZIP: 10154

COMPUTER READABLE FORM:

MEDIUM TYPE: FLOPPY DISK

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: WORDPERFECT 5.1

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/453,952

FILING DATE: 30-MAY-1995

CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/038,948

FILING DATE: 26-MAR-1993

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/930,462

FILING DATE: 20-AUG-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/364,379

FILING DATE: 12-JUN-1989

ATTORNEY/AGENT INFORMATION:

NAME: DOROTHY R. AUPH

REGISTRATION NUMBER: 36,434

REFERENCE/DOCKET NUMBER: 2026-4032 USA

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 758-4800

TELEFAX: (212) 751-6849

TELEX: 421792

INFORMATION FOR SEQ ID NO: 7:

SEQUENCE CHARACTERISTICS:

LENGTH: 424

TYPE: amino acid

STRANDEDNESS: single

TOPOLOGY: unknown

MOLECULE TYPE: protein

ORIGINAL SOURCE:

ORGANISM: human

STRAIN:

INDIVIDUAL ISOLATE:

DEVELOPMENTAL STAGE:

HAPLOTYPE:

TISSUE TYPE:

CELL TYPE:

CELL LINE:

ORGANELLE:

FEATURE:

NAME/KEY: 2P3
LOCATION:
IDENTIFICATION METHOD:
OTHER INFORMATION: human 2P3 protein
US-08-453-952-7

Query Match 97.1%; Score 235; DB 1; Length 424;
Best Local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWFVQGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
|||||
Db 308 SWFVEGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 348

RESULT 4
US-08-862-903-7
Sequence 7, Application US/08862903
Patent No. 5916768

GENERAL INFORMATION:
APPLICANT: DEAN, JURRIEN
TITLE OF INVENTION: CONTRACEPTIVE VACCINE
TITLE OF INVENTION: BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA
TITLE OF INVENTION: POLYPEPTIDES
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/862,903
FILING DATE: 30-May-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: DOROTHY R. AOTH
REGISTRATION NUMBER: 36,434
REFERENCE/DOCKET NUMBER: 2026-4032 USA
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 424
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: unknown
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: human
STRAIN:
INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
HAPLOTYPE:
TISSUE TYPE:

CELL TYPE:
CELL LINE:
ORGANELLE:
FEATURE:
NAME/KEY: 2P3
LOCATION:
IDENTIFICATION METHOD:
OTHER INFORMATION: human 2P3 protein
US-08-862-903-7

Query Match 97.1%; Score 235; DB 2; Length 424;
Best Local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWFVQGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
|||||
Db 308 SWFVEGPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 348

RESULT 5
US-08-484-158B-61
Sequence 61, Application US/08484158B
Patent No. 5976545

GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Pharmaceutical Compositions for
TITLE OF INVENTION: Immunocotraccption
NUMBER OF SEQUENCES: 61
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,158B
FILING DATE: 07-JUNE-95
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/149,223
FILING DATE: 09-NOV-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-92
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 32794
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
INFORMATION FOR SEQ ID NO: 61:
SEQUENCE CHARACTERISTICS:
LENGTH: 424 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
DESCRIPTION: /desc =
DESCRIPTION: "deduced amino acid sequence of human zpc"

S-08-484-158B-61

Query Match 97.1%; Score 235; DB 2; Length 424;
Best Local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

1 SWFPVQGPADICCCCKNGDCGTPSHSRORPHVMSQMSRSVS 41
308 SWFPVQGPADICCCCKNGDCGTPSHSRORPHVMSQMSRSVS 348

RESULT 6

US-08-484-993B-49
Sequence 49, Application US/08484993B
Patent No. 5837497
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,993B
FILING DATE: 09-NOV-1993
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:
SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-484-993B-49

Query Match 93.4%; Score 226; DB 2; Length 223;
Best Local Similarity 90.2%; Pred. No. 4.5e-20;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

1 SWFPVQGPADICCCCKNGDCGTPSHSRORPHVMSQMSRSVS 41
107 SWFPVQGPADICCCCKNGDCGTPSHSRORPHVMSQMSRSVS 147

RESULT 7
US-08-484-158B-49
Sequence 49, Application US/08484158B

Patent No. 5976545
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Pharmaceutical Compositions for
TITLE OF INVENTION: Immunocontraception
NUMBER OF SEQUENCES: 61
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,158B
FILING DATE: 07-JUNE-95
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/149,223
FILING DATE: 09-NOV-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-93
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-92
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 32794
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:
SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-484-158B-49

Query Match 93.4%; Score 226; DB 2; Length 223;
Best Local Similarity 90.2%; Pred. No. 4.5e-20;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

1 SWFPVQGPADICCCCKNGDCGTPSHSRORPHVMSQMSRSVS 41
107 SWFPVQGPADICCCCKNGDCGTPSHSRORPHVMSQMSRSVS 147

RESULT 8

US-08-484-596A-49
Sequence 49, Application US/08484596A
Patent No. 5981228
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive

```

        FILING DATE: 09-NOV-1993
        APPLICATION NUMBER: 08/012,990
        FILING DATE: 29-JAN-1993
        PRIOR APPLICATION DATA:
        APPLICATION NUMBER: 07/973,341
        FILING DATE: 09-NOV-1992
        ATTORNEY/AGENT INFORMATION:
        NAME: Clough, David W.
        REGISTRATION NUMBER: 36,107
        REFERENCE/DOCKET NUMBER: 31745
        TELECOMMUNICATION INFORMATION:
        TELEPHONE: 312/474-6653
        TELEFAX: 312/474-0448
        TELEX: 25-3856
        INFORMATION FOR SEO ID NO: 49:
        SEQUENCE CHARACTERISTICS:
        LENGTH: 223 amino acids
        TYPE: amino acid
        TOPOLOGY: linear
        MOLECULE TYPE: protein
        US-08-480-150A-49

Query Match          93.4%; Score 226; DB 2; Length 223;
Best Local Similarity 90.2%; Pred. No. 4.5e-20;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

OY      1  SWPVGQADICCCNKGDGCPHSRRQPHVMSQWSRSVS 41
      |||||:|||||:|||||:|||||:|||||:|||||:
db      107  SWPEVGGADICCCSKGDCGPHSRRQPHVMSQWSRSAS 147

```

US-08-458-731-49
Sequence 49, Application US/08458731
Patent No. 6001599
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunocontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borum
STREET: 6000 Sears Tower, 233 South Wacker Drive
City: Chicago
State: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent In Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US//08/458,731
FILING DATE: 09-NOV-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

Thu Jan 10 11:47:25 2002

TELECOMMUNICATION INFORMATION:

TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448

TELEX: 25-3856

INFORMATION FOR SEQ ID NO: 12:

SEQUENCE CHARACTERISTICS:

LENGTH: 426 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

US-08-480-150A-12

Query Match 62.48; Score 151; DB 2; Length 426;

Best local Similarity 60.0%; Pred. No. 8.3e-11;

Matches 24; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

QY 2 WFPVQGPADICQCCNKGDCGTPSHSRROPHYMSQMSRSYS 41

Db 307 WYPVQGSADICRCCKNGSCGLPGRSRRLSHLERGWKRSYS 346

Search completed: January 10, 2002, 11:20:40
Job time: 51 sec

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OW protein - protein search, using sw model

Run on: January 10, 2002, 11:19:49 ; Search time 12.48 Seconds
(without alignments)
73.929 Million cell updates/s.

Title: U9-09-252-828A-2

Perfect score: 242
Sequence: 1 SWPPVGPADICCCCKNGDC.....TPSHRRQPHYMSQMSRSVS 41Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 212252 seqs, 22503292 residues

Total number of hits satisfying chosen parameters: 212252

Minimum DB seq length: 0
Maximum DB seq length: 200000000Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summariesDatabase : Issued Patents AA:*
1: /cgcn2_6/prodata/2/1aa/5A.COMB.pep:*
2: /cgcn2_6/prodata/2/1aa/5B.COMB.pep:*
3: /cgcn2_6/prodata/2/1aa/6A.COMB.pep:*
4: /cgcn2_6/prodata/2/1aa/6B.COMB.pep:*
5: /cgcn2_6/prodata/2/1aa/PCFUS.COMB.pep:*
6: /cgcn2_6/prodata/2/1aa/Backfile1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed.
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match Length	ID	Description
1	235	97.1	424 1 US-08-453-472-7	Sequence 7, App 1
2	235	97.1	424 1 US-08-038-948-4	Sequence 4, App 1
3	235	97.1	424 1 US-08-453-952-7	Sequence 7, App 1
4	235	97.1	424 2 US-08-862-903-7	Sequence 7, App 1
5	235	97.1	424 2 US-08-864-158B-61	Sequence 61, App 1
6	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
7	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
8	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
9	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
10	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
11	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
12	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
13	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
14	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
15	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
16	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
17	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
18	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
19	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
20	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
21	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
22	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
23	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
24	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
25	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
26	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1
27	235	97.1	424 2 US-08-484-993B-49	Sequence 49, App 1

28	126	52.1	424 2 US-08-862-903-8	Sequence 8, App 1
29	119	49.2	421 2 US-08-484-993B-6	Sequence 6, App 1
30	119	49.2	421 2 US-08-484-158B-6	Sequence 6, App 1
31	119	49.2	421 2 US-08-484-596A-6	Sequence 6, App 1
32	119	49.2	421 2 US-08-480-150A-6	Sequence 6, App 1
33	119	49.2	421 3 US-08-458-731-6	Sequence 6, App 1
34	119	49.2	421 3 US-08-149-223A-6	Sequence 24, App 1
35	109	45.0	421 2 US-08-484-993B-24	Sequence 24, App 1
36	109	45.0	421 2 US-08-484-158B-24	Sequence 24, App 1
37	109	45.0	421 2 US-08-484-596A-24	Sequence 24, App 1
38	109	45.0	421 2 US-08-480-150A-24	Sequence 24, App 1
39	109	45.0	421 3 US-08-458-731-24	Sequence 24, App 1
40	109	45.0	421 3 US-08-149-223A-24	Sequence 24, App 1
41	100	41.3	415 2 US-08-484-993B-8	Sequence 8, App 1
42	100	41.3	415 2 US-08-484-158B-8	Sequence 8, App 1
43	100	41.3	415 2 US-08-484-596A-8	Sequence 8, App 1
44	100	41.3	415 2 US-08-480-150A-8	Sequence 8, App 1
45	100	41.3	415 3 US-08-458-731-8	Sequence 8, App 1

ALIGNMENTS

RESULT 1
US-08-453-472-7
Sequence 7, Application US/08453472
Patent No. 5626846
GENERAL INFORMATION:
APPLICANT: DEAN, JURRIEN
TITLE OF INVENTION: CONTRACEPTIVE VACCINE
TITLE OF INVENTION: BASED ON ALLOIMUNIZATION WITH ZONA PELLUCIDA
TITLE OF INVENTION: POLYPEPTIDES
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESSES:
ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/453,472
FILING DATE: 30-May-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: DOROTHY R. AUTH
REGISTRATION NUMBER: 36,434
REFERENCE/DOCKET NUMBER: 2026-4032 US3
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
TELEX: 421792
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 424
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: unknown
MOLECULE TYPE: protein

```

ORIGINAL SOURCE:
ORGANISM: human
STRAIN:
INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
HAPOTYPE:
TISSUE TYPE:
CELL TYPE:
CELL LINE:
ORGANELLE:
FEATURE:
NAME/KEY: ZP3
LOCATION:
IDENTIFICATION METHOD:
OTHER INFORMATION: human ZP3 protein
US-08-453-472-7

Query Match 97.1%; Score 235; DB 1; Length 424;
Best local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0

QY 1 SWPVGADPADIQCCKNGDCTPSHSRQPHVMSQMSRSYS 41
|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 308 SWPVEGPADICQCCKNGDCTPSHSRRQPHVMSQMSRSAS 348

RESULT 2
US-08-038-948-4
; Sequence 4, Application US/08038948
; Patent No. 5641487
; GENERAL INFORMATION:
; APPLICANT: DEAN, JURRIEN
; TITLE OF INVENTION: CONTRACEPTIVE VACCINE BASED ON
; TITLE OF INVENTION: ALLOIMMUNIZATION WITH ZONA PELLUCIDA POLYPEPTIDES
; NUMBER OF SEQUENCES: 14
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CUSHMAN, DARBY & CUSHMAN
; STREET: 1100 New York Avenue, N.W.
; CITY: Washington
; STATE: D.C.
; COUNTRY: U.S.
; ZIP: 20005-3918
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/038,948
; FILING DATE: 26-MAR-1993
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/930,462
; FILING DATE: 20-AUG-1992
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/364,379
; FILING DATE: 12-JUN-1989
; ATTORNEY/AGENT INFORMATION:
; NAME: SCOTT, Watson T.
; REGISTRATION NUMBER: 26,581
; REFERENCE/DOCKET NUMBER: 99152/E-266-88/2
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (202) 861-3000
; TELEFAX: (202) 822-0944
; TELEX: 6714627 CUSH
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 424 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein

```

```

US-08-038-948--4
Query Match          97.1% Score 235; DB 1; Length 424;
Best Local Similarity 95.1%; Pred. No. 7e-21;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Oy      1 SWFPGVGPADICCCCNKGCCTPSHSRRQPHYMSQMSRSVS 41
        |||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db       308 SWFPVEGPDICCCCNKGDCGTPSHSRRQPHYMSQMSRSAS 348

RESULT 3
US-08-453-952-7
: Sequence 7, Application US/08453952
: Patent No. 5672488
GENERAL INFORMATION:
APPLICANT: DEAN, JURRIEN
TITLE OF INVENTION: CONTRACEPTIVE VACCINE
TITLE OF INVENTION: BASED ON ALLOIMMUNIZATION WITH ZONA PELLUCIDA
TITLE OF INVENTION: POLYPEPTIDES
NUMBER OF SEQUENCES: 12
CORRESPONDENCE ADDRESS:
ADDRESS: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: USA
ZIP: 10154
COMPUTER READABLE FORM:
MEDIUM TYPE: FLOPPY DISK
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WORDPERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/453,952
FILING DATE: 30-May-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/038,948
FILING DATE: 26-MAR-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/930,462
FILING DATE: 20-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/364,379
FILING DATE: 12-JUN-1989
ATTORNEY/AGENT INFORMATION:
NAME: DOROTHY R. AUTH
REGISTRATION NUMBER: 36,434
REFERENCE/DOCKET NUMBER: 2026-4032 USA
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEFAX: (212) 751-6849
TELEX: 421792
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 424
TYPE: amino acid
STRANDNESS: single
TOPOLOGY: unknown
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: human
STRAIN:
INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
HAPLOTYPE:
TISSUE TYPE:
CELL TYPE:
CELL LINE:
ORGANELLE:
FEATURE:
```

INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
HAPLOTYPE:
TISSUE TYPE:

TOPOLOGY: linear
 MOLECULE TYPE: protein
 DESCRIPTION: /desc =
 DESCRIPTION: "deduced amino acid sequence of human ZPC"

STREET: 6300 Sears

TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653

TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448

TELEFAX: 312/474-0448
TELEX: 25-3856

TELEEX: 23-3620 ID NO: 12:
FORMATION FOR SEC
CHARACTERISTICS:

IDENT: 5
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 426 amino acids

LENGTH: 426 amino acids
TYPE: amino acid

TYPE: amino acid
 TOPOLOGY: linear
 PROTEIN TYPE: protein

MOLECULE TYPE: protein

480-150A-12

62

Local Similarity 60

Query Match	62.4%	Score 151;	DB 2;	Length 426;
Best Local Similarity	60.0%	Pred. No. 8.3e-11;		
Matches 24;	Conservative	5;	Mismatches 11;	Indels 0;
				Gaps 0;

2: **MPVCCDADTQCCNKCDGCTPSHSRRQPHVMSQNSRSVS** 41
Matches: 24; Conservation: 3

2 WFPVGGPADICCCCKNGDCGTPSHSRQPHVMSQWSVSV 41

307 WYVEGSADICRCNKGSCGIPGRSRRLSHLEGRKRSVS 346

b
30 / WIPYEGSADLCHNOCNOC-----

Search completed: January 10, 2002, 11:20:40
Job time: 51 sec

500

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 10, 2002, 11:20:44 ; Search time 10.18 seconds

(without alignments)
147.668 Million cell updates/sec

Title: US-09-252-828A-2

Perfect score: 242
Sequence: 1 SWPVPVGGPADICCCCKNGDC.....TPSHSRQPHVMSQWSRSVS 41

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 100059 seqs, 3664827 residues

Total number of hits satisfying chosen parameters: 100059

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

PCst-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_39:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Match	Query Length	ID	Description
1	235	97.1	424	1	2P3A_HUMAN
2	229	94.6	372	1	2P3B_HUMAN
3	226	93.4	424	1	2P3A_MACRA
4	192	79.3	424	1	2P3A_CALSO
5	151	62.4	426	1	2P3_CANFA
6	143	59.1	422	1	2P3_MESAU
7	136	56.2	424	1	2P3_FELCA
8	119	52.1	424	1	2P3_MOUSE
9	116	49.2	421	1	2P3_PIG
10	109	45.0	421	1	2P3_BOVIN
11	100	41.3	415	1	2P3_RABIT
12	59	24.4	999	1	DSG3_HUMAN
13	56.5	23.3	819	1	STL_CHLMU
14	55.5	22.9	436	1	5H6_RAT
15	55	22.7	865	1	PM1L_HUMAN
16	55	22.7	867	1	PROM_MOUSE
17	54	22.3	202	1	P21_SOYBN
18	54	22.3	477	1	MA2_HUMAN
19	54	22.3	477	1	MA2_MOUSE
20	53.5	22.1	338	1	DEPB_HUMAN
21	52.5	21.7	447	1	ER11_HORVU
22	52.5	21.7	447	1	ER12_DAVCA
23	52.5	21.7	447	1	ER12_HORVU
24	52.5	21.7	447	1	ER1A_MAIZE
25	52.5	21.7	447	1	ER1A_ORYSA
26	52.5	21.7	447	1	ER1A_PEA
27	52.5	21.7	447	1	ER1A_SOYBN
28	52.5	21.7	447	1	ER1A_TOBAC
29	52.5	21.7	447	1	ER1A_VICFA
30	52.5	21.7	447	1	ER1A_WHEAT
31	52.5	21.7	448	1	ER1A_LYCES
32	52.5	21.7	449	1	ER11_DAVCA
33	52.5	21.7	449	1	ER1A_ARATH

34	52.5	21.7	449	1	EF1A_MANES	049169 manihot esc
35	51.5	21.3	339	1	SYFA_CHLPN	094676-chlamydia p
36	51	21.1	65	1	TXW6_NAJNA	P29180 najia najia (
37	51	21.1	281	1	TRY2_DROER	P34630 drosophila
38	51	21.1	1132	1	DNBI_HSV6U	P52538 human herpe
39	51	21.1	1132	1	DNBI_HSV62	P52538 human herpe
40	50.5	20.9	74	1	NXLD_ACAAN	P34073 acanthophis
41	50.5	20.9	139	1	IGF_MYXGL	P22618 myxine glut
42	50.5	20.9	622	1	ACH4_CHICK	P03482 gallus gall
43	50	20.7	174	1	SODC_CAUCR	P20379 caulobacter
44	50	20.7	182	1	KRUC_SHEEP	P26372 ovis aries
45	50	20.7	269	1	IL1B_MOUSE	P10749 mus musculu

ALIGNMENTS

RESULT	1	STANDARD	PRT	424 AA.
1	2P3A_HUMAN			
ID	2P3A_HUMAN			
AC	P21754;			
DT	01-MAY-1991 (Rel. 18, Created)			
DT	01-MAY-1991 (Rel. 18, Last sequence update)			
DT	30-MAY-2000 (Rel. 39, Last annotation update)			
DE	ZONA PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR (ZONA PELLUCIDA			
DE	GLYCOPROTEIN 2P3A) (ZONA PELLUCIDA PROTEIN C) (SPERM RECEPTOR (ZP3).			
GN	2P3A OR ZP3.			
OS	Homo sapiens (human).			
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Homidae; Homo.			
OX	NCBI_Taxid=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=90349545; PubMed=2385582;			
RA	Chamberlin M.E.; Dean J.;			
RT	"Human homolog of the mouse sperm receptor.";			
RL	Proc. Natl. Acad. Sci. U.S.A. 87:6014-6018(1990).			
RN	[2]			
RP	SEQUENCE OF 329-424 FROM N.A.			
RC	TISSUE=Ovary;			
RX	MEDLINE=93122771; PubMed=1478648;			
RA	van Duin M., Polman J.E., Verkoelen C.C., Bunschoten H.,			
RT	Meyerink J.H., Olive W., Aitken R.J.;			
RT	"Cloning and characterization of the human sperm receptor ligand ZP3:			
RT	evidence for a second polymorphic allele with a different frequency.			
RT	In the Caucasian and Japanese populations.";			
RL	Genomics 14:1064-1070(1992).			
CC	- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR			
CC	SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE			
CC	SPECIES-SPECIFICITY OF THE INSEMINATION.			
CC	- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN			
CC	WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.			
CC	- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR			
CC	MATRIX.			
CC	- PM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES.			
CC	- SIMILARITY: CONTAINS 1 ZP DOMAIN.			
CC	-----			
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration			
CC	between the Swiss Institute of Bioinformatics and the EMBL outstation -			
CC	the European Bioinformatics Institute. There are no restrictions on its			
CC	use by non-profit institutions as long as its content is in no way			
CC	modified and this statement is not removed. Usage by and for commercial			
CC	entities requires a license agreement (See http://www.isb-sib.ch/announce/			
CC	or send an email to license@isb-sib.ch).			
CC	-----			
CC	EMBL: M60504; AAA61336.1; .			
CC	PIR: A36000; A36000.			
CC	MIM: 182889; .			
CC	InterPro: IPR001507; zona_pellucida.			
CC	Pfam: PF00100; zona_pellucida.1.			
CC	PRINTS: PR00023; ZPELLUCIDA.			
CC	SMART: SM00241; ZP.1.			
CC	PROSITE: PS00682; ZP_DOMAIN; 1.			

QY	DB	Score	DB 1:	Length	372:
1	308	94.6%;	Pred. No. 1,4e-20;		
SWFPGVGPADITCQCCKNGGCGPSSHRSRPHVWMSQSRVS 41					
SWFPGVGPADITCQCCKNGGCGPSSHRSRPHVWMSQSRVS 348					
Matches 38; Conservative 1; Mismatches 2; Indels 0; Gaps 0;					
Query Match					
Best Local Similarity 92.7%;					
Matches 38; Conservative 1; Mismatches 2; Indels 0; Gaps 0;					
RESULT 3					
ID	2P3A_MACRA	STANDARD;	PRT;	424 AA.	
AC	P53785;				
DT	01-OCT-1996 (Rel. 34, Created)				
DT	01-OCT-1996 (Rel. 34, Last sequence update)				
DT	30-MAY-2000 (Rel. 39, Last annotation update)				
DE	ZONA PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN 2P3A) (ZONA PELLUCIDA PROTEIN C) (SPERM RECEPTOR) (ZP3).				
GN	ZP3A OR ZP3.				
OS	Macaca radiata (Bonnet monkey).				
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Primates; Catarrhini; Cerepithecidae;				
OC	Cercopitheciinae; Macaca.				
OX	NCBI_Taxid=9548;				
RN	[1]				
RP	SEQUENCE FROM N.A.				
RC	TISSUE-Ovary;				
RC	MEDLINE=96249321; PubMed=8848588;				
RA	Kohli R. S. K., Kaul R., Banerjee K., Gupta S. K.;				
RT	"Nucleotide sequence of cDNA encoding bonnet monkey (Macaca radiata) zona pellucida glycoprotein ZP3."				
RT	Reprod. Fert. Dev. 7:1209-1212(1995).				
RL	-1 FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION.				
CC	-1 SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.				
CC	-1 SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR MATRIX.				
CC	-1 PMW: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES.				
CC	-1 SIMILARITY: CONTAINS 1 ZP DOMAIN.				
CC	-----				
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb.ch/announce/ or send an email to license@isb-sib.ch).				
CC	-----				
DR	EMBL: X82639; CAA57961.1;				
DR	InterPro: IPR001507; zona_pellucida.				
DR	Pfam: PF00100; zona_pellucida; 1.				
DR	PRINTS: PRO0023; ZPELLUCIDA.				
DR	SMART: SM00241; ZP, 1.				
DR	PROSITE: PS00682; ZP_DOMAIN; 1.				
KW	Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane; Extracellular matrix; Multigene family.				
FT	SIGNAL 1 22				
FT	CHAIN 23 424				
FT	DOMAIN 23 387				
FT	EXTRACELLULAR (POTENTIAL).				

FT	TRANSMEM	388	408	POTENTIAL.
FT	DOMAIN	409	424	CYTOPLASMIC (POTENTIAL).
FT	DOMAIN	45	307	ZP.
FT	CARBOHYD	125	125	N-LINKED (GLCNAC. . .) (POTENTIAL).
FT	CARBOHYD	147	147	N-LINKED (GLCNAC. . .) (POTENTIAL).
FT	CARBOHYD	272	272	N-LINKED (GLCNAC. . .) (POTENTIAL).
SQ	SEQUENCE	424 AA;	47040 MW;	3B41C4CFA3792331 CRC64;

Query Match	93.4%;	Score 226;	DB 1;	Length 424;
Best Local Similarity	90.2%;	Pred. No. 3.6e-20;		
Matches 37;	Conservative 1;	Mismatches 41;	Indels 0;	Gaps 0;

1 SWFVPGADPICCCCKGDCCTPSHSRRQPHVMQWSKSVS 41
|||||:|||||||:|||||||:|||||||:|||||

DJ 308 SWFVEGPADICCCSKGDCGTPSHSRQPHVMQWSKRSAS 348


```

RESULT      4
ZP3A_CALSO STANDARD: PRT: 424 AA.
ID ZP3A_CALSO
AC P53786;
DE 01-OCT-1996 (Rel. 34, Created)
DE 01-OCT-1996 (Rel. 34, Last sequence update)
DE 30-MAY-2000 (Rel. 39, Last annotation update)
DE ZONA PELLUICIDA SPERM-BINDING PROTEIN 3A PRECURSOR (ZONA PELLUICIDA GLYCOPROTEIN ZP3A) (ZONA PELLUICIDA PROTEIN C) (SPERM RECEPTOR) (ZP3).
GM ZP3A OR ZP3.
OS Callithrix sp. (Marmoset).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Platyrrhini; Callitrichidae;
OC Callitrich.
OX NCBI_TaxID=9485;
RY [1]
RE SEQUENCE FROM N.A.
RC TISSUE=Ovary.
RX MEDLINE=94363314; PubMed=8081814;
RZ Thilalai-Koothan P., van Duin M., Aitken R.J.;
RZ "Cloning, sequencing and oocyte-specific expression of the marmoset sperm receptor protein, ZP3."
RL Zygote 1:93-101(1993).
RT -I- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUICIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION.
CC -I- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUICIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
CC -I- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR MATRIX.
CC -I- PMW: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES.
CC -I- SIMILARITY: CONTAINS 1 ZP DOMAIN.
-----
CC CC THIS SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
-----
DR DR EMBL: S71825; AAB31866.1; -
DR InterPro: IPR001507; zona_pellucida.
DR Pfam: PF00100; zona_pellucida_1.
DR PRINTS: PR00023; ZPELLUICIDA.
DR SMART: SM00241; ZP; 1.
DR PROSITE: PS00682; ZP_DOMAIN; 1.
KW Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane; Extracellular matrix; Multigene family.
KW SIGNAL
FT CHAIN 1 22 POTENTIAL.
FT DOMAIN 23 424 ZONA PELLUICIDA SPERM-BINDING PROTEIN 3A.
FT TRANSMEM 23 387 EXTRACELLULAR (POTENTIAL).
FT DOMAIN 388 408 POTENTIAL.
FT DOMAIN 409 424 CYTOPLASMIC (POTENTIAL).
FT DOMAIN 45 307 ZP.

```

	FT	CARBOHYD	125	125	N-LINKED (GLCNAC. . .) (POTENTIAL).
	FT	CARBOHYD	147	147	N-LINKED (GLCNAC. . .) (POTENTIAL).
	FT	CARBOHYD	180	180	N-LINKED (GLCNAC. . .) (POTENTIAL).
	FT	CARBOHYD	272	272	N-LINKED (GLCNAC. . .) (POTENTIAL).
	SQ	SEQUENCE	424 AA;	46809 MW;	IDACBD03026C2739 CRC64;
OY					
		1	SMFPGGADICCCCKNGDCGPHSRQRHVMSQWSNS	39	
Db		308	SWFVEGGPADICCCCKSGKDCGTPSHARQPHVSLGSQS	346	
RESULT	5				
ID	ZP3_CANFA	STANDARD:	PRT:	426 AA.	
AC	P48631;				
DT	01-FEB-1996 (Rel. 33, Created)				
DT	01-FEB-1996 (Rel. 33, Last sequence update)				
DT	30-MAY-2000 (Rel. 39, Last annotation update)				
DE	ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).				
CN	ZP3 OR ZPC.				
OS	Canis familiaris (Dog).				
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
OC	Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.				
OX	NCBI_TaxID=9615;				
RN	(1)				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Ovary;				
RX	MEDLINE=95143578; PubMed=7841460;				
RA	Harris J.D., Hilder D.W., Fontenot G.K., Hsu K.T., Yurewicz E.C., Sacco A.G.;				
RT	"Cloning and characterization of zona pellucida genes and cDNAs from a variety of mammalian species: the ZPA, ZPB and ZPC gene families.";				
RL	DNA Seq. 4:361-393(1994).				
	(2)				
RP	SEQUENCE FROM N.A.				
RC	TISSUE=Ovary;				
RL	Okazaki Y., Sugimoto M.;				
CC	Submitted (JAN-1995) to the EMBL/Genbank/DBJ databases.				
CC	-I FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).				
CC	-I SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.				
CC	-I SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR MATRIX.				
CC	-I PMM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES (BY SIMILARITY).				
CC	-I SIMILARITY: CONTAINS 1 ZP DOMAIN.				
CC	-----				
CC	This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL Outstation - CC the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or_send_an_email_to_license@lsb-sib.ch).				
CC	or send an email to license@lsb-sib.ch .				
DR	EMBL: U05780; AAA74387.1; -.				
DR	EMBL: D45070; BAA08098.1; -.				
DR	InterPro: IPR001507; zona_pellucida.				
DR	Pfam: PF00100; zona_pellucida.1.				
DR	PRINTS: PR00023; ZPELUCIDA.				
DR	SMART: SMO0241; ZP. 1.				
DR	PROSITE: PS00682; ZP_DOMAIN; 1.				
KW	Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane; Extracellular matrix; Multigene family.				
FT	SIGNAL 1 22 POTENTIAL.				

CHAIN 23 426 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
DOMAIN 23 385 EXTRACELLULAR (POTENTIAL).
TRANSMEM 386 406 POTENTIAL.
DOMAIN 407 426 CYTOPLASMIC (POTENTIAL).
DOMAIN 43 305 ZP.
CARBOHYD 123 123 N-LINKED (GLCNAC. . .) (POTENTIAL).
CARBOHYD 145 145 N-LINKED (GLCNAC. . .) (POTENTIAL).
CARBOHYD 244 244 N-LINKED (GLCNAC. . .) (POTENTIAL).
CONFLICT 227 227 L -> P (IN REF. 2).
CONFLICT 307 307 W -> S (IN REF. 2).
CONFLICT 343 343 K -> R (IN REF. 2).
SEQUENCE 426 AA; 47367 MW; BE5825A949DCA172 CRC64;

Query Match 62.4%; Score 151; DB 1; Length 426;
Best Local Similarity 60.0%; Pred. No. 3.6e-11;
Matches 24; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

OY 2 WFPVGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41
Db 307 WYVEGSGADICRCCKNGSGCLPGRSRRLSLERGMKRSVS 346

RESULT 6
ZP3_MESAU STANDARD; PRT: 422 AA.
ID ZP3_MESAU
AC P23491;
DT 01-NOV-1991 (Rel. 20, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 30-MAY-2000 (Rel. 39, Last annotation update)
DE ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3) (SPERM RECEPTOR (ZONA PELLUCIDA PROTEIN C)).
GN ZP3.
OS Mesocricetus auratus (Golden hamster).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
OC Mesocricetus
NCBI_Taxid=10036;
RX NCBI_Taxid=10036;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Ovary;
RX MEDLINE=91078540; PubMed=2257975;
RA Kinloch R.A., Ruiz-Seller B., Massarman P.M.;
RT "Genomic organization and polypeptide primary structure of zona pellucida glycoprotein hzp3, the hamster sperm receptor.";
RL Dev. Biol. 142:414-421(1990).
CC -1- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION.
CC -1- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
CC -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR MATRIX.
CC -1- TISSUE SPECIFICITY: OOCYTES.
CC -1- DEVELOPMENTAL STAGE: GROWING OOCYTES.
CC -1- PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES.
CC -1- SIMILARITY: CONTAINS 1 ZP DOMAIN.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation at the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@isb-sib.ch).
CC -----
CC EMBL: M63629; AAA37079.1;
CC InterPro: IPR001507; zona_pellucida.
CC Pfam: PF00100; zona_pellucida; 1.
CC PRINTS: PR00023; ZPELLUCIDA.
CC SMART: SM00241; ZP, 1.
CC PROSITE: PS00682; ZP_DOMAIN; 1.
CC Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane;

KW Extracellular matrix.
FT SIGNAL 1 22 POTENTIAL.
FT CHAIN 23 422 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
FT DOMAIN 23 386 EXTRACELLULAR (POTENTIAL).
FT TRANSMEM 387 407 POTENTIAL.
FT DOMAIN 408 422 CYTOPLASMIC (POTENTIAL).
FT DOMAIN 45 306 ZP.
FT DOMAIN 119 158 PRO-RICH.
FT DOMAIN 208 257 PRO-RICH.
FT DOMAIN 146 146 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 271 271 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 302 302 N-LINKED (GLCNAC. . .) (POTENTIAL).
SEQUENCE 422 AA; 45827 MW; D0F95BE7FE87E01 CRC64;

Query Match 59.1%; Score 143; DB 1; Length 422;
Best Local Similarity 56.1%; Pred. No. 3.2e-10;
Matches 23; Conservative 7; Mismatches 11; Indels 0; Gaps 0;

OY 1 SWFPVGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41
Db 307 SWSPVEGDAVCGCCSSGDCGSSRSRYQAHGVSWMKRSAS 347

RESULT 7
ZP3_FELCA STANDARD; PRT: 424 AA.
ID ZP3_FELCA
AC P48832;
DT 01-FEB-1996 (Rel. 33, Created)
DT 01-FEB-1996 (Rel. 33, Last sequence update)
DT 30-MAY-2000 (Rel. 39, Last annotation update)
DE ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP3) (SPERM RECEPTOR (ZONA PELLUCIDA PROTEIN C)).
GN ZP3 OR ZPC.
OS Felis silvestris catus (Cat).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Felis.
OC Mammalia; Eutheria; Carnivora; Fissipedia; Felidae;
NCBI_Taxid=9685;
RX NCBI_Taxid=9685;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Ovary;
RX MEDLINE=95143578; PubMed=7841460;
RA Harris J.D., Hibler D.W., Fontenot G.K., Hsu K.T., Yurewicz E.C.,
RT "Cloning and characterization of zona pellucida genes and cDNAs from a variety of mammalian species: the ZPA, ZPB and ZPC gene families.";
RL DNA Seq. 4:361-393(1994).
CC [2]
CC -1- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).
CC -1- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
CC -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR MATRIX.
CC -1- PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES (BY SIMILARITY).
CC -1- SIMILARITY: CONTAINS 1 ZP DOMAIN.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation at the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@isb-sib.ch).
CC -----
CC EMBL: U05778; AAA74390.1;
CC InterPro: IPR001507; zona_pellucida.
CC Pfam: PF00100; zona_pellucida; 1.
CC PRINTS: PR00023; ZPELLUCIDA.
CC SMART: SM00241; ZP, 1.
CC PROSITE: PS00682; ZP_DOMAIN; 1.
CC Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane;

```

CR InterPro: IPR001507; zona_pellucida.
CR Pfam: PF00100; zona_pellucida. 1.
CR PRINTS: PR00023; ZPELUCIDA.
CR SMART: SM00241; ZP_1.
CR PROSITE: PS00682; ZP_DOMAIN; FALSE_NEG.
CR GlycoProtein: Signal; Sulfation; Sperm; Receptor; Transmembrane;
CR Extracellular matrix; Multigene family.
CR SIGNAL 1 22
CR CHAIN 23 424 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
CR DOMAIN 23 383 EXTRACELLULAR (POTENTIAL).
CR TRANSMEM 384 404 POTENTIAL.
CR DOMAIN 405 424 CYTOPLASMIC (POTENTIAL).
CR CARBOHYD 52 52 N-LINKED (GLCNAC. . .) (POTENTIAL).
CR CARBOHYD 123 123 N-LINKED (GLCNAC. . .) (POTENTIAL).
CR CARBOHYD 145 145 N-LINKED (GLCNAC. . .) (POTENTIAL).
CR CONFLICT 72 72 G -> W (IN REF. 2).
CR CONFLICT 264 264 D -> Y (IN REF. 2).
CR SEQUENCE 424 AA; 46853 MW; CFC62F35F9AFCOD CRC64;

Query Match 56.2%; Score 136; DB 1; Length 424;
Best Local Similarity 55.0%; Pred. No. 2.2e-09;
Matches 22; Conservative 3; Mismatches 15; Indels 0; Gaps 0;

OY 2 WFPVGGPADICCCCKNGDCTPSHRRPHVMSOWMSRSVS 41
Db 307 WFPVGGPADICCKNGKSCGLOGRSHLSDRPHMKMS 346

RESULT 8
ZP3_MOUSE STANDARD: PRT; 424 AA.
AC: P10761;
DT 01-JUL-1989 (Rel. 11, Created)
DT 01-NOV-1997 (Rel. 35, Last sequence update)
DT 30-MAY-2000 (Rel. 39, Last annotation update)
DE ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA
DE GLYCOPROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
CN ZP3 OR ZP-3.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RN SEQUENCE FROM N.A.
RN MEDLINE=88242926; PubMed=3378665;
RN Ringuette M.J., Chamberlin M.E., Baur A.W., Sobieski D.A., Dean J.;
RN "Molecular analysis of cDNA coding for ZP3, a sperm binding protein
RN of the mouse zona pellucida."
RN Dev. Biol. 127:287-293(1988).
RN [2]
RN REVISION TO 387.
RN Dean J.;
RN Submitted (NOV-1996) to the EMBL/Genbank/DBJ databases.
RN [3]
RN SEQUENCE FROM N.A.
RN STRAIN=CD-1; TISSUE=Liver;
RN MEDLINE=89240048; PubMed=2541416;
RN Kinloch R.A., Massarman P.M.;
RN "Nucleotide sequence of the gene encoding zona pellucida glycoprotein
RN ZP3 -- the mouse sperm receptor."
RN Nucleic Acids Res. 17:2861-2863(1989).
RN [4]
RN SEQUENCE FROM N.A.
RN MEDLINE=88320451; PubMed=2842770;
RN Kinloch R.A., Roller R.J., Fimiani C.M., Massarman D.A.,
RN Wassarman P.M.;
RN "Primary structure of the mouse sperm receptor polypeptide determined
RN by genomic cloning."
RN Proc. Natl. Acad. Sci. U.S.A. 85:6409-6413(1988).
RN [5]
RN SEQUENCE OF 49-63; 197-204; 219-233 AND 261-275.

```

```

RC STRAIN=CD-1;
RA MEDLINE=93050795; PubMed=1330788;
RA Rosiere T.K., Massarman P.M.;
RT "Identification of a region of mouse zona pellucida glycoprotein mZP3
RT that possesses sperm receptor activity."
RL Dev. Biol. 154:309-317(1992).
CC -1- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR
CC SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE
CC SPECIES-SPECIFICITY OF THE INSEMINATION.
CC -1- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN
CC WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
CC -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
CC MATRIX.
CC -1- TISSUE SPECIFICITY: OOCYTES.
CC -1- DEVELOPMENTAL STAGE: EXPRESSED DURING THE 2-WEEK GROWTH PHASE OF
CC OOGENESIS, PRIOR TO OVULATION.
CC -1- PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES.
CC -1- SIMILARITY: CONTAINS 1 ZP DOMAIN.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: M20026; AAB18629.1; -.
CC DR EMBL: X14376; CAA32550.1; -.
CC DR PIR: S04189; S04189.
CC DR PIR: A30334; A30334.
CC DR PIR: A31232; A31232.
CC DR MGD: MGT:99215; ZP3.
CC DR InterPro: IPR001507; zona_pellucida.
CC DR Pfam: PF00100; zona_pellucida. 1.
CC DR PRINTS: PR00023; ZPELUCIDA.
CC DR SMART: SM00241; ZP_1.
CC DR PROSITE: PS00682; ZP_DOMAIN; 1.
CC KW Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane;
CC KM Extracellular matrix.
CC FT SIGNAL 1 22
CC FT CHAIN 23 424 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
CC FT DOMAIN 23 387 EXTRACELLULAR (POTENTIAL).
CC FT TRANSMEM 388 408 POTENTIAL.
CC FT DOMAIN 409 424 CYTOPLASMIC (POTENTIAL).
CC FT DOMAIN 45 308 ZP.
CC FT CARBOHYD 146 146 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT CARBOHYD 273 273 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT CARBOHYD 304 304 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT CARBOHYD 327 327 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT CARBOHYD 330 330 N-LINKED (GLCNAC. . .) (POTENTIAL).
CC FT SEQUENCE 424 AA; 46303 MW; 9089903FBD268365 CRC64;

Query Match 52.1%; Score 126; DB 1; Length 424;
Best Local Similarity 53.7%; Pred. No. 3.6e-08;
Matches 22; Conservative 5; Mismatches 14; Indels 0; Gaps 0;

OY 1 SWFPVGGPADICCCCKNGDCTPSHRRPHVMSOWMSRSVS 41
Db 309 SWLVEGDADICDCCHNGCNSSSSQFQIHGRPMKSLVS 349

RESULT 9
ZP3_PIG STANDARD: PRT; 421 AA.
ID ZP3_PIG
AC P42098;
DT 01-NOV-1995 (Rel. 32, Created)
DT 01-NOV-1995 (Rel. 32, Last sequence update)
DT 20-AUG-2001 (Rel. 40, Last annotation update)
DE ZONA PELLUCIDA SPERM-BINDING PROTEIN 3-BETA PRECURSOR (ZONA PELLUCIDA
DE GLYCOPROTEIN ZP3-BETA) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C).
GN ZP3B OR ZPC.

```

```

SO      10      3-BOVIN
DB      308     WSPVGGPDDICRCSKRGISGRSMRLSH   337

QY      2       WPVVGADIDCCCKNGDCGTPSHSRDPH   31
        | |:| | | | | | | | | | | | | | | |
        1 |:| | | | | | | | | | | | | | | |

Query Match          45.0%; Score 109; DB 1; Length 421;
Best Local Similarity 56.7%; Pred. No. 3.9e-06;
Matches 17; Conservative 3; Mismatches 10; Indels 0; Gaps 0;

SEQUENCE FROM N.A.
(1)
TSSUE-Ovary; MEDLINE=95143578; PubMed=7841460;
Harris J.D., Hblbler D.W., Fontenot G.K., Hsu K.T., Yurewicz E.C.,
Sacco A.G.;
Cloning and characterization of zona pellucida genes and cDNAs from
a variety of mammalian species: the ZPA, ZPB and ZPC gene families."
DNA Seq. 4:361-393(1994).
-1- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR
SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE
SPECIES-SPECIFICITY OF THE INSEMINATION (BY SIMILARITY).
-1- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN
WHICH ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
-1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
MATRIX.
-1- PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES (BY
SIMILARITY).
-1- SIMILARITY: CONTAINS 1 ZP DOMAIN.
-----
This SWISS-PROT entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
-----
EMBL: U05775; AAA74385.1;
Interpro: IPR001507; zona_pellucida.
Pfam: PF00100; zona_pellucida; 1.
PRINTS: PM00241; ZP_1
SMART: SM00241; ZP_1
DR PROSITE: PS00662; ZP_DOMAIN: 1.
DR GlycoProtein: Signal; Sulfation; Sperm; Receptor; Transmembrane;
KW Extracellular matrix; Multigene family.
KW SIGNAL
FT CHAIN 1 22 POTENTIAL.
FT DOMAIN 23 421 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
FT TRANSMEM 382 402 EXTRACELLULAR (POTENTIAL).
FT DOMAIN 403 421 CYTOPLASMIC (POTENTIAL).
FT DOMAIN 44 306 ZP.
FT CARBOHYD 124 124 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 146 146 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 179 179 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 271 271 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT SEQUENCE 421 AA; 46545 MW; 905C4722B7BA11DC CRC64;
```

```

RESULT 11
223_RABIT STANDARD; PRT: 415 AA.
AC P48833;
DE 01-FEB-1996 (Rel. 33, Created)
DE 01-FEB-1996 (Rel. 33, Last sequence update)
DE 01-FEB-1996 (Rel. 33, Last annotation update)
DE ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR (ZONA PELLUCIDA
DE GLYCOPROTEIN ZP3) (SPERM RECEPTOR) (ZONA PELLUCIDA PROTEIN C)
DE (FRAGMENT).
DE ZP3 OR ZPC.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OM NCBI_TaxID=9986;
RN [1]
RF SEQUENCE FROM N.A.
RC TISSUE=Ovary;
RX MEDLINE=95143578; PubMed=7841460;
RA Harris J.D., Hibler D.W., Fontenot G.K., Hsu K.T., Yurewicz E.C.,
RA Sacco A.G.;
RT Cloning and characterization of zona pellucida genes and cDNAs from
RT a variety of mammalian species: the ZPA, ZPB and ZPC gene families.";
RL DNA Seq. 4:361-393(1994)
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: U05782; AAA74392.1;
DR InterPro: IPR001507; zona_pellucida.
DR Pfam: PF00100; zona_pellucida.1.
DR SMART: SM00241; ZP_1.
DR PROSITE: PS00682; ZP_DOMAIN; 1.
KW Glycoprotein; Signal; Sulfation; Sperm; Receptor; Transmembrane;
KW Extracellular matrix; Multigene family.
FT SIGNAL 1 18 POTENTIAL.
FT CHAIN 19 415 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
FT DOMAIN 19 378 EXTRACELLULAR (POTENTIAL).
FT TRANSMEM 379 399 CYTOPLASMIC (POTENTIAL).
FT DOMAIN 400 415 POTENTIAL.
FT DOMAIN 41 301 ZP.
SQ SEQUENCE 415 AA; 44987 MW; 77396CF1BA3P5CB CRC64;

Query Match 41.3%; Score 100; DB 1; Length 415;
Best local Similarity 42.6%; Pred. No. 4.6e-05;
Matches 20; Conservative 5; Mismatches 10; Indels 12; Gaps 2;

DY 1 SMPVQGPADICCCCKNGDC-----GTP-----SHSRQPHWMSQ 35
DB 302 SWAVEGSGADICCCGNGDCDLIAGSPMNHANRSLRSRHVTEE 348

```

```

RESULT 12
DSG3_HUMAN STANDARD; PRT: 999 AA.
AC P32926;
DE 01-OCT-1993 (Rel. 27, Created)
DE 01-OCT-1993 (Rel. 27, Last sequence update)
DE 20-AUG-2001 (Rel. 40, Last annotation update)
DE DESMOGLEIN 3 PRECURSOR (130 KDA PEMPHIGUS VULGARIS ANTIGEN) (PVA).
DE DSG3.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
OM NCBI_TaxID=9606;

RESULT 13
SYL_CHLMU STANDARD; PRT: 819 AA.
AC Q9PK14;
DE 20-AUG-2001 (Rel. 40, Created)

RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=92069753; PubMed=1720352;
RA Amagai M., Klaus-Kovtun V., Stanley J.R.;
RT Autoantibodies against a novel epithelial cadherin in pemphigus
RT vulgaris, a disease of cell adhesion.";
RL Cell 67:869-877(1991).
CC -1- FUNCTION: COMPONENT OF INTERCELLULAR DESMOsome JUNCTIONS.
CC INVOLVED IN THE INTERACTION OF PLAQUE PROTEINS AND INTERMEDIATE
CC FILAMENTS MEDIATING CELL-CELL ADHESION.
CC -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.
CC -1- TISSUE SPECIFICITY: EPIDERMIS, TONGUE, TONSIL, ESOPHAGUS AND
CC CARCINOMAS.
CC -1- DOMAIN: CALCIUM MAY BE BOUND BY THE CADHERIN-LIKE REPEATS
CC (POTENTIAL).
CC -1- DISEASE: PEMPHIGUS VULGARIS (PV) IS A POTENTIALLY LETHAL SKIN
CC DISEASE IN WHICH EPIDERMAL BLISTERS OCCUR AS THE RESULT OF THE
CC LOSS OF CELL-CELL ADHESION CAUSED BY THE ACTION OF AUTOANTIBODIES
CC AGAINST DSG3.
CC -1- SIMILARITY: CONTAINS 5 CADHERIN DOMAINS.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
CC EMBL: M76482; AAA60230.1;
DR PIR: A41088; IGHU3.
DR HSSP: P09803; IEDH.
DR MIM: 169615;
DR InterPro: IPR002126; Cadherin.
DR Pfam: PF00028; cadherin; 4.
DR SMART: SM00112; CA; 4.
DR PROSITE: PS00232; CADHERIN_1; 3.
DR PROSITE: PS02658; CADHERIN_2; 4.
KW Cell adhesion; Signal; Transmembrane; Cytoskeleton; Glycoprotein;
KW Calcium-binding; Repeat.
FT SIGNAL 1 23 POTENTIAL.
FT PROPEP 24 49 DESMOGLEIN 3.
FT CHAIN 50 999 EXTRACELLULAR (POTENTIAL).
FT DOMAIN 50 615 POTENTIAL.
FT TRANSMEM 616 640 CYTOPLASMIC (POTENTIAL).
FT DOMAIN 641 999 CADHERIN 1.
FT DOMAIN 159 268 CADHERIN 2.
FT DOMAIN 269 383 CADHERIN 3.
FT DOMAIN 386 499 CADHERIN 4.
FT REPEAT 910 935 DESMOGLEIN REPEAT 1.
FT REPEAT 936 966 DESMOGLEIN REPEAT 2.
FT CARBOHYD 110 110 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 180 180 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 459 459 N-LINKED (GLCNAC. . .) (POTENTIAL).
FT CARBOHYD 545 545 N-LINKED (GLCNAC. . .) (POTENTIAL).
SQ SEQUENCE 999 AA; 107503 MW; 60479DD46AC219A1 CRC64;

Query Match 24.4%; Score 59; DB 1; Length 999;
Best local Similarity 39.3%; Pred. No. 7.9;
Matches 11; Conservative 4; Mismatches 7; Indels 6; Gaps 1;

QY 10 DICCCCKKGGDCGT-----PSHSRRQPH 31
DB 585 EYCCDNRGIGIGTSYPTTSPGTRYGRPH 612

```

RA STRAIN-SPRAGUE-DAWLEY; TISSUE:Striatum,
RX MEDLINE=93196608; Pubmed=7680751;
RA Monson F.J. Jr., Shen Y., Ward R.P., Hamblin M.W., Sibley D.R.;
RT "Cloning and expression of a novel serotonin receptor with high
RT affinity for tricyclic psychotropic drugs.";
RL Mol. Pharmacol. 43:320-327(1993).
RN [2]
RN SEQUENCE FROM N.A.
RP MEDLINE=93277562; Pubmed=8399146;
RX Raat M., Traffort E., Arrang J.-M., Tardivel-Lacombe J., Diaz J.,
RA Leurs R., Schwartz J.-C.;
RT "A novel rat serotonin (5-HT6) receptor: molecular cloning,
RT localization and stimulation of cAMP accumulation.";
RL Biochem. Biophys. Res. Commun. 193:268-276(1993).
RN [3]
RN SEQUENCE FROM N.A.
RP STRAIN-WISTAR;
RC Martini R.;
RA Submitted (xxx-1993) to the EMBL/GenBank/DBJ databases.
RL -1- FUNCTION: THIS IS ONE OF THE SEVERAL DIFFERENT RECEPTORS FOR
CC 5-HYDROXYTRYPTAMINE (SEROTONIN), A BIOGENIC HORMONE THAT FUNCTION
CC AS A NEUROTRANSMITTER, A HORMONE, AND A MITOGEN. THE ACTIVITY OF
CC THIS RECEPTOR IS MEDIATED BY G PROTEINS THAT STIMULATES ADENYLYTE
CC CYCLASE. IT HAS A HIGH AFFINITY FOR TRICYCLIC PSYCHOTROPIC DRUGS.
CC -1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN.
CC -1- TISSUE SPECIFICITY: LOCALIZED EXCLUSIVELY IN THE CENTRAL NERVOUS
CC SYSTEM, PREDOMINANTLY IN THE CORPUS STRIATUM BUT ALSO IN VARIOUS
CC LIMBIC AND CORTICAL REGIONS.
CC -1- SIMILARITY: BELONGS TO FAMILY 1 OF G-PROTEIN COUPLED RECEPTORS.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL Outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage fee and for commercial
CC entities requires a license agreement (see <http://www.isb-sdb.ch/announce/>
CC or send an email to license@isb-sdb.ch).
CC -----
CC EMBL; L03202; AAA40618.1; -
CC EMBL; S62043; AAB26908.1; -
CC EMBL; L19656; AAA40611.1; -
CC GCRDB; GCR.0723; -
CC GCRDB; GCR.0719; -
CC InterPro: IPR000276; GPCR_Rhodopsn.
CC Pfam: PF00001; 7tm.1; 1.
CC PRINTS; PR00237; GPCR_Rhodopsn.
CC PRINTS; PR01102; 5HTRECEPT.
CC PROSITE; PS00237; G_PROTEIN_RECP_FL1; 1.
CC PROSITE; PS50262; G_PROTEIN_RECP_FL2; 1.
CC G-protein coupled receptor; Transmembrane; Glycoprotein;
KW Multigene family.
KW DOMAIN 1 34
FT DOMAIN 1 57
FT TRANSMEM 38 64
FT TRANSMEM 65 85
FT DOMAIN 86 100
FT TRANSMEM 101 122
FT TRANSMEM 123 144
FT TRANSMEM 145 166
FT DOMAIN 167 184
FT TRANSMEM 185 208
FT TRANSMEM 209 265
FT DOMAIN 266 290
FT TRANSMEM 291 295
FT TRANSMEM 296 320
FT DOMAIN 321 436
FT CARBOHD 9 9
FT DISULFD 9 180
FT CONFLICT 57 57
FT CONFLICT 336 436
FT CONFLICT 436

Result No.	Score	Query Match	Length	DB	ID	Description
1	217	89.7	210	4	Q12903	Q12903 homo sapien
2	125	51.7	424	1	P97708	P97708 rattus norv
3	115	47.5	418	11	O9ER10	O9ER10 microtus br
4	100.5	41.5	454	13	O91675	O91675 xenopus lae
5	100.5	41.5	460	13	O91728	O91728 xenopus lae
6	98.5	40.7	446	13	P97672	P97672 gallus gall
7	98.5	40.7	446	13	O9PW68	O9PW68 gallus gall
8	95	39.3	422	6	O77685	O77685 trichosurus
9	87	36.0	446	13	O73670	O73670 coturnix co
10	60.5	25.0	99	2	O9P889	O9P889 xyella fas
11	60.5	25.0	436	13	O9DS37	O9DS37 pimphales
12	59.5	24.6	934	2	O05478	O05478 streptomyce
13	58.5	24.2	559	13	O98812	O98812 brachydanio
14	57	22.6	1120	5	O20778	O20778 caenorhabdi
15	56	23.1	122	4	O9P166	O9P166 homo sapien
16	56	23.1	448	10	O9FYV3	O9FYV3 saccharum c
17	56	23.1	641	11	O08463	O08463 rattus norv
18	56	23.1	642	11	O70421	O70421 mus musculus
19	56	23.1	647	4	O94815	O94815 homo sapien

20	56	3.1	648	4	09PU38	09PU38 homo sapien
21	55.5	22.9	344	11	054788	054788 mus musculi
22	55.5	22.9	349	11	099M34	099M34 rattus norv
23	55.5	22.9	435	13	09PU06	09PU06 carassius a
24	55.5	22.9	447	10	09ZRP9	09ZRP9 malus domes
25	55	22.7	295	2	044588	044588 alcaligenes
26	55	22.7	591	11	09J149	09J149 rattus norv
27	54.5	22.5	340	12	09JF36	09JF36 vaccinia v
28	54.5	22.5	424	13	092027	092027 cyprinus ce
29	54.5	22.5	559	13	0919M5	0919M5 xenopus lae
30	54.5	22.5	753	11	060473	060473 cavia porce
31	54	22.3	214	6	09RD56	09RD56 streptomyce
32	54	22.3	214	6	097602	097602 oryctolagus
33	54	22.3	315	6	097601	097601 oryctolagus
34	54	22.3	477	6	097600	097600 oryctolagus
35	54	22.3	537	4	09HBE2	09HBE2 homo sapien
36	54	22.3	544	1	Q48304	Q48304 haloferrax s
37	54	22.3	592	13	057328	057328 gallus gall
38	54	22.3	609	4	Q9HDE1	Q9HDE1 homo sapien
39	53.5	22.1	227	5	Q9V4G7	Q9V4G7 drosophila
40	53.5	22.1	270	4	Q9BY16	Q9BY16 homo sapien
41	53.5	22.1	338	4	060521	060521 homo sapien
42	53.5	22.1	351	1	Q9YA58	Q9YA58 aeropyrum p
43	53.5	22.1	379	10	Q9FYF9	Q9FYF9 arabidopsis
44	53.5	22.1	738	4	060327	060327 homo sapien
45	53.5	22.1	768	5	Q19330	Q19330 caenorhabdi

ALIGNMENTS

RESULT	1	
012903		
ID	012903;	PRELIMINARY; PRT; 210 AA.
AC	012903;	
DT	01-NOV-1996 (TREMBLrel. 01, Created)	
DT	01-NOV-1996 (TREMBLrel. 01, Last sequence update)	
DT	01-JUN-2001 (TREMBLrel. 17, Last annotation update)	
DE	POM-TP3.	
OS	Homo sapiens (Human),	
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;	
OC	Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.	
OX	NCBI_TaxID=9606;	
RN	[1]	
RP	SEQUENCE FROM N.A.	
RC	TISSUE=OVARY;	
RX	MEDLINE=95309900; PubMed=7789967;	
RA	Kipersztock S., Osawa G.A., Liang L.F., Modi W.S., Dean J.,	
RT	"POM-2p3, a bipartite transcript derived from human zp3 and a POM	
RT	homologue.";	
RL	Genomics 25:354-359(1995).	
DR	EMBL: U01099; AAA85788.1; -;	
DR	InterPro: IPR001507; zona_pellucida.	
DR	Pfam: PF00100; zona_pellucida; 1.	
QO	SEQUENCE 210 AA; 23196 MW; 669723EC1B77C8D0 CRC64;	

Query Match	89.7%;	Score 217;	DB 4;	Length 210
-------------	--------	------------	-------	------------

Best Local Similarity 87.8%; Pred. No. 3.9e-22;
Matches 36; Conservative 2; Mismatches 3; Indels 0; Gaps 0.

QY 1 SNEPVPVGGADICQCCNCKGDCGTPSHSRQPHVMSQWSHSVS 41
 ||||:|||||:|||||
 Db 146 SNEPVEGPDADICQCCNCKGDCGTPSHSRQPRVVSQWSHSVS 186

RESULT	2
P97708	PRELIMINARY; PRT; 424 AA.
ID	P97708
AC	P97708; O55084;
DT	01-NOV-1998 (TrEMBLrel. 08, Created)
DF	01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT	01-JUN-2001 (TrEMBLrel. 17, Last annotation update)

DE ZONA PELLUCIDA SPERM-BINDING PROTEIN 3 PRECURSOR
 DE (ZONA PELLUCIDA GLYCOPROTEIN ZP3) (ZONA PELLUCIDA GLYCOPROTEIN 3).
 GN ZP3 OR ZP-3.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 RN NCBI_TaxID=10116;
 RP [1]
 RC SEQUENCE FROM N.A.
 RC STRAIN=WISTAR; TISSUE=OVARY;
 RA Macduff P.E., Kerr L.E., Aitken R.J.;
 RL J. Reprod. Fert. Abstr. Ser. 18:86-86(1996).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=SPRAGUE-DAWLEY; TISSUE=OVARY;
 RA Akatsuka K., Yoshida-Komiyama H., Tulsiani D.P., Orgedin-Crist M.,
 HIROI M., ARAKI Y.;
 RL Submitted (NOV-1995) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: FUNCTIONS AS A SPERM-RECEPTOR. IT IS RESPONSIBLE FOR
 CC SPERM-ADHESION TO THE ZONA PELLUCIDA, AND MAY CONTRIBUTE TO THE
 CC SPECIES-SPECIFICITY OF THE INSEMINATION.
 CC -1- SUBUNIT: ZP3 FORMS WITH ZP1 AND ZP2 THE ZONA PELLUCIDA, IN WHICH
 CC ZP2 AND ZP3 COMPLEX INTO COPOLYMERS CROSS-LINKED BY ZP1.
 CC -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN. EXTRACELLULAR
 CC MATRIX.
 CC -1- PTM: SULFATED GLYCOPROTEIN WITH O-LINKED OLIGOSACCHARIDES (BY
 CC SIMILARITY).
 CC -1- SIMILARITY: CONTAINS A ZP DOMAIN, WHICH CURRENTLY HAS BEEN FOUND
 CC IN ZP2, ZP3, GP2, TGFR-3 AND UROMODULIN.
 CC EMBL: Y10823; CAA71787.1; -;
 CC EMBL: D78482; BAA24456.1; -;
 CC InterPro: IPR001507; zona_pellucida.
 DR Pfam: PR00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELLUCIDA.
 DR SMART: SM00241; ZP; 1.
 DR PROSITE: PS00682; ZP_DOMAIN; FALSE NEG.
 KW Glycoprotein; Signal; Sulfatation; Sperm; Receptor; Transmembrane;
 KW Extracellular matrix.
 FT SIGNAL 1 16 POTENTIAL.
 FT CHAIN 17 424 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3.
 FT DOMAIN 17 387 EXTRACELLULAR (POTENTIAL).
 FT TRANSMEM 388 408 POTENTIAL.
 FT DOMAIN 409 424 CYTOPLASMIC (POTENTIAL).
 FT DOMAIN 45 308 ZP.
 FT DOMAIN 329 334 POLY-SER.
 FT CARBOHYD 146 146 N-LINKED (GLCNAc. . .) (POTENTIAL).
 FT CARBOHYD 273 273 N-LINKED (GLCNAc. . .) (POTENTIAL).
 FT CARBOHYD 304 304 N-LINKED (GLCNAc. . .) (POTENTIAL).
 FT CARBOHYD 327 327 N-LINKED (GLCNAc. . .) (POTENTIAL).
 FT CARBOHYD 330 330 N-LINKED (GLCNAc. . .) (POTENTIAL).
 FT CONFLICT 55 55 V -> A (IN REF. 2).
 FT CONFLICT 112 112 N -> S (IN REF. 2).
 FT CONFLICT 412 412 K -> M (IN REF. 2).
 SQ SEQUENCE 424 AA; 45900 MW; 2AB42CB14DEB701 CRC64;

Query Match 51.7%; Score 125; DB 11; Length 424;
 Best Local Similarity 51.2%; Pred. No. 2.8e-09;
 Matches 21; Conservative 5; Mismatches 15; Indels 0; Gaps 0;

OY 1 SWFVPGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41
 DB 309 SWLPVEGDIDICCCSGNCSNCSSEFETHEPQWSTLVIS 349

RESULT 3
 QSERIO PRELIMINARY; PRT; 418 AA.
 DT 01-MAR-2001 (Tremblrel. 16, Created)
 DT 01-MAR-2001 (Tremblrel. 16, Last sequence update)
 DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
 DT ZONA PELLUCIDA 3 GLYCOPROTEIN.

OS Microtus brandti.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Arvicolinae;
 OC Microtus.
 RN NCBI_TaxID=137787;
 RP [1]
 RC SEQUENCE FROM N.A.
 RC TISSUE=OVARY;
 RA Li H., Piao Y.S., Zhang Z.B., Zhu C., Hardy C., Hinds L.A.;
 RT "Cloning and characterization of zona pellucida cDNA from Brandt's
 RT vole."
 RL Submitted (SEP-2000) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AF304487; ANG18455.1;
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELLUCIDA.
 DR SMART: SM00241; ZP; 1.
 DR PROSITE: PS00682; ZP_DOMAIN; UNKNOWN 1.
 SQ SEQUENCE 418 AA; 45662 MW; 12C05062555F468F CRC64;

Query Match 47.5%; Score 115; DB 11; Length 418;
 Best Local Similarity 44.7%; Pred. No. 6.5e-08;
 Matches 17; Conservative 8; Mismatches 13; Indels 0; Gaps 0;

OY 1 SWFVPGPADICCCCKNGDCGTPSHSRQPHVMSQMSR 38
 DB 309 SWLPVEGDIDICCCCKNGDCSSRSRPRAHVAVPRNR 346

RESULT 4
 QSERIO PRELIMINARY; PRT; 454 AA.
 DT 01-NOV-1996 (Tremblrel. 01, Created)
 DT 01-FEB-1997 (Tremblrel. 02, Last sequence update)
 DT 01-JUN-2001 (Tremblrel. 17, Last annotation update)
 DE ZONA PELLUCIDA C GLYCOPROTEIN PRECURSOR.
 GN XLZPC.
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae;
 OC Xenopodinae; Xenopus.
 RN NCBI_TaxID=8335;
 RP [1]
 RC SEQUENCE FROM N.A.
 RA Hedrick J.L., Yang J.C.;
 RL Submitted (JAN-1996) to the EMBL/GenBank/DBJ databases.
 DR EMBL: U44952; AAB39079.1; -;
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR SMART: SM00241; ZP; 1.
 KW Signal.
 FT SIGNAL 1 21 POTENTIAL.
 FT CHAIN 22 454 ZONA PELLUCIDA C GLYCOPROTEIN.
 SQ SEQUENCE 454 AA; 49589 MW; ADBB9A3B978E5197 CRC64;

Query Match 41.5%; Score 100.5; DB 13; Length 454;
 Best Local Similarity 46.3%; Pred. No. 6.7e-06;
 Matches 19; Conservative 9; Mismatches 10; Indels 3; Gaps 3;

OY 1 SWFVPGPADICCCCKNGDCGTPSHSRQPHVMSQMSR 38
 DB 330 SWSPLOGPSNICSCDITGNCVSPGQSRRLGPPYSGSRWMD 370

RESULT 5
 QSERIO PRELIMINARY; PRT; 460 AA.
 DT 01-NOV-1996 (Tremblrel. 01, Created)
 DT 01-JAN-1998 (Tremblrel. 05, Last sequence update)

DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 DE GP43.
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidoidea; Pipidae;
 OC Xenopodinae; Xenopus.
 OX NCBI_TaxID=8355;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RC TISSUE-OVARIES FROM HCG-TREATED FEMALES;
 RX MEDLINE=98013448; PubMed=9352194;
 RA Kubo H., Kawano T., Tsubuki S., Kawashima S., Katagiri C., Suzuki A.;
 R2 "A major glycoprotein of Xenopus egg vitelline envelope, gp41, is a
 R3 frog homolog of mammalian zp3."
 RL Dev Growth Differ. 39:405-417(1997).
 RL EMBL: D86568; BAA13117.1; -.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 460 AA; 5084 MW; 3798F3E3394FDF34 CRC64;

Query Match 41.5%; Score 100.5; DB 13; Length 460;
 Best Local Similarity 46.3%; Pred. No. 6.8e-06;
 Matches 19; Conservative 9; Mismatches 10; Indels 3; Gaps 3;
 QY 1 SWPVOGPDICCCCKNGDC-GTFSHSR-QPHYM-SQMSR 38
 DB 336 SWSPLOGSPNISCCTDNCVSPGOSRRLGPFYSGSRMQ 376
 P79762 PRELIMINARY; PRT; 446 AA.
 AC P79762;
 DT 01-MAY-1997 (TReMBLrel. 03, Created)
 DT 01-MAY-2000 (TReMBLrel. 13, last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OX NCBI_TaxID=9031;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RX MEDLINE=99203469; PubMed=10103002;
 RA Takeuchi Y., Nishimura K., Aoki N., Adachi T., Sato C., Kitajima K.,
 RA Matsuda T.;
 R2 "A 42-kDa glycoprotein from chicken egg-envelope, an avian homolog of
 R3 the ZPC family glycoproteins in mammalian zona pellucida. Its first
 R4 identification, cDNA cloning and granulosa cell-specific expression."
 RL Eur. J. Biochem. 260:736-742(1999).
 RL EMBL: D89097; BAA13760.2; -.
 DR InterPro: IPR001179; FKBP_PPIase.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELUCIDA.
 DR PROSITE: PS00453; FKBP_PPIASE_1; UNKNOWN_1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 446 AA; 47700 MW; DC5415232C22F03C CRC64;

RESULT 6
 P79762 PRELIMINARY; PRT; 446 AA.
 AC P79762;
 DT 01-MAY-1997 (TReMBLrel. 03, Created)
 DT 01-MAY-2000 (TReMBLrel. 13, last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OX NCBI_TaxID=9031;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RX MEDLINE=99203469; PubMed=10103002;
 RA Takeuchi Y., Nishimura K., Aoki N., Adachi T., Sato C., Kitajima K.,
 RA Matsuda T.;
 R2 "A 42-kDa glycoprotein from chicken egg-envelope, an avian homolog of
 R3 the ZPC family glycoproteins in mammalian zona pellucida. Its first
 R4 identification, cDNA cloning and granulosa cell-specific expression."
 RL Eur. J. Biochem. 260:736-742(1999).
 RL EMBL: D89097; BAA13760.2; -.
 DR InterPro: IPR001179; FKBP_PPIase.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELUCIDA.
 DR PROSITE: PS00453; FKBP_PPIASE_1; UNKNOWN_1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 446 AA; 47700 MW; DC5415232C22F03C CRC64;

Query Match 40.7%; Score 98.5; DB 13; Length 446;
 Best Local Similarity 44.4%; Pred. No. 1.2e-05;
 Matches 16; Conservative 7; Mismatches 12; Indels 1; Gaps 1;

QY 1 SWPVOGPDICCCCKNGDCGTFSHSRQPHYMSQW 36
 DB 330 TWVEGSRDVCNCCETGNCBPALSRRL-NPMERW 364
 P79762 PRELIMINARY; PRT; 446 AA.
 AC P79762;
 DT 01-MAY-1997 (TReMBLrel. 03, Created)
 DT 01-MAY-2000 (TReMBLrel. 13, last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OX NCBI_TaxID=9031;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RX MEDLINE=99203469; PubMed=10103002;
 RA Takeuchi Y., Nishimura K., Aoki N., Adachi T., Sato C., Kitajima K.,
 RA Matsuda T.;
 R2 "A 42-kDa glycoprotein from chicken egg-envelope, an avian homolog of
 R3 the ZPC family glycoproteins in mammalian zona pellucida. Its first
 R4 identification, cDNA cloning and granulosa cell-specific expression."
 RL Eur. J. Biochem. 260:736-742(1999).
 RL EMBL: D89097; BAA13760.2; -.
 DR InterPro: IPR001179; FKBP_PPIase.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELUCIDA.
 DR PROSITE: PS00453; FKBP_PPIASE_1; UNKNOWN_1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 446 AA; 47700 MW; DC5415232C22F03C CRC64;

RESULT 7

Q9PWF8 PRELIMINARY; PRT; 446 AA.
 AC Q9PWF8;
 DT 01-MAY-2000 (TReMBLrel. 13, Created)
 DT 01-MAY-2000 (TReMBLrel. 13, last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 DE ZONA PELLUCIDA C PROTEIN.
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OX NCBI_TaxID=9031;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RC TISSUE=LIVER;
 RA Kono Y., Matsuda T.;
 R2 "Gallus gallus zona pellucida C protein gene."
 RL Submitted (AUG-1999) to the EMBL/GenBank/DBJ databases.
 RL EMBL: AB031033; BAA83418.1; -.
 DR InterPro: IPR001179; FKBP_PPIase.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELUCIDA.
 DR PROSITE: PS00453; FKBP_PPIASE_1; UNKNOWN_1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 446 AA; 47670 MW; DC5409532C22F03C CRC64;

Query Match 40.7%; Score 98.5; DB 13; Length 446;
 Best Local Similarity 44.4%; Pred. No. 1.2e-05;
 Matches 16; Conservative 7; Mismatches 12; Indels 1; Gaps 1;

QY 1 SWPVOGPDICCCCKNGDCGTFSHSRQPHYMSQW 36
 DB 330 TWVEGSRDVCNCCETGNCBPALSRRL-NPMERW 364
 Q77685 PRELIMINARY; PRT; 422 AA.
 AC Q77685;
 DT 01-NOV-1998 (TReMBLrel. 08, Created)
 DT 01-NOV-1998 (TReMBLrel. 08, last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 DE ZONA PELLUCIDA 3 PROTEIN.
 GN ZP3.
 OS Trichosurus vulpecula (Brush-tailed possum).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Theria; Diprotodontia; Phalangeridae; Trichosurus.
 OX NCBI_TaxID=9337;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RX McGartney C.A., Mate K.E.;
 RA "Cloning and characterization of a zona pellucida 3 cDNA from a
 RT marsupial, the brush-tail possum Trichosurus vulpecula."
 RL Zygote 0:0-0(1998).
 RL EMBL: AF079524; AAC28736.1; -.
 DR InterPro: IPR001179; FKBP_PPIase.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELUCIDA.
 DR PROSITE: PS00453; FKBP_PPIASE_1; UNKNOWN_1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 422 AA; 45714 MW; 58BA61A92F82612A CRC64;

Query Match 39.3%; Score 95; DB 6; Length 422;
 Best Local Similarity 53.6%; Pred. No. 3.6e-05;
 Matches 15; Conservative 4; Mismatches 9; Indels 0; Gaps 0;
 QY 2 WFPVOGPDICCCCKNGDCGTFSHSRQ 29
 DB 314 WLPVEGPRDICSQGTGTCTISLSSRRK 341
 Q77685 PRELIMINARY; PRT; 422 AA.
 AC Q77685;
 DT 01-NOV-1998 (TReMBLrel. 08, Created)
 DT 01-NOV-1998 (TReMBLrel. 08, last sequence update)
 DT 01-JUN-2001 (TReMBLrel. 17, last annotation update)
 DE ZONA PELLUCIDA 3 PROTEIN.
 GN ZP3.
 OS Trichosurus vulpecula (Brush-tailed possum).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Theria; Diprotodontia; Phalangeridae; Trichosurus.
 OX NCBI_TaxID=9337;
 RA [1]
 R2 SEQUENCE FROM N.A.
 RX McGartney C.A., Mate K.E.;
 RA "Cloning and characterization of a zona pellucida 3 cDNA from a
 RT marsupial, the brush-tail possum Trichosurus vulpecula."
 RL Zygote 0:0-0(1998).
 RL EMBL: AF079524; AAC28736.1; -.
 DR InterPro: IPR001179; FKBP_PPIase.
 DR InterPro: IPR001507; zona_pellucida.
 DR Pfam: PF00100; zona_pellucida; 1.
 DR PRINTS: PR00023; ZPELUCIDA.
 DR PROSITE: PS00453; FKBP_PPIASE_1; UNKNOWN_1.
 DR SMART: SM00241; zp; 1.
 SQ SEQUENCE 422 AA; 45714 MW; 58BA61A92F82612A CRC64;

Query Match	36.0%	Score 87	DB 13	Length 446
Best Local Similarity	37.8%	Pred. NO. 0.00047		
Matches 14; Conservative	6	Mismatches 13	Indels 4	Gaps 1
OY	1	SWFVQGPADICQCNKGDCGTPSHSRQPHYMSQWS	37	
ob	330	TWVEGSRDYVSCCETGNCDAARALR---	LnFWMS 362	

Query Match	Best Local Similarity	25.0%;	Score 60.5;	DB 2;	Length 99;
Matches 11;	Conservative 3;	Mismatches 9;	Indels 1;	Gaps 1;	
QY 12	COCCKNGDCGTPSHSRPHVMSQ 35				
DB 36	CRCACK-HCGIPEHSRTEPNIPEQ 58				
RESULT 11					
ID Q9DG37	PRELIMINARY;	PRT;	436 AA.		
AC Q9DG37;					
DT 01-MAR-2001 (TREMBLrel. 16, Created)					
DT 01-MAR-2001 (TREMBLrel. 16, Last sequence update)					
DT 01-JUN-2001 (TREMBLrel. 17, Last annotation update)					
DE ZONA_PELLUCCIDA GLYCOPROTEIN 3 (FRAGMENT).					
GN ZP3.					
OS Pimephales promelas.					
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;					
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Ostariophysi;					
OC Cypriniformes; Cyprinidae; Leuciscinae; Pimephales.					
OX NCBI_TaxID=90988;					
LN [1]					
RN SEQUENCE FROM N.A.					
RP Morris C.A., Thomas-Jones R.E., Cryer J., Woodhead S., Kille P.;					
RT "Identification of the ZP3 cDNA sequence from Pimephales promelas					
RT exposed to diethylstilbestrol.";					
RL Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.					
RL EMBL; AF192407; AAG28398.1; -					
DR InterPro: IPR001507; zona_pellucida.					
DR Pfam: PF00100; zona_pellucida; 1.					
DR PRINTS: PR00023; ZPPELLUCIDA.					
DR SMART; SM00241; ZP; 1.					
FT NON_TER 1					
FT SEQUENCE 436 AA; 47690 MW; 8C54DC948DBC41B6 CRC64;					
QY 2	WFPVGPADICOCCKNGDCGTPSHSRPHVMSQSRVS 41				
DB 385	WFAADGNDVCGCCD-STCGPDGERFASPYGIEMEGKAS 423				
Query Match	25.0%;	Score 60.5;	DB 13;	Length 436;	
Best Local Similarity	27.5%;	Pred. No. 1.9;	24;	Indels 1;	Gaps 1;
Matches 11;	Conservative 4;	Mismatches 24;	Indels 1;	Gaps 1;	
QY 2	WFPVGPADICOCCKNGDCGTPSHSRPHVMSQSRVS 41				
DB 385	WFAADGNDVCGCCD-STCGPDGERFASPYGIEMEGKAS 423				
RESULT 12					
ID Q05478	PRELIMINARY;	PRT;	934 AA.		
AC Q05478;					
DT 01-JUL-1997 (TREMBLrel. 04, Created)					
DT 01-JUL-1997 (TREMBLrel. 04, Last sequence update)					
DT 01-JUN-2001 (TREMBLrel. 17, Last annotation update)					
DE LIPA TRANSCRIPTIONAL ACTIVATOR.					
LN LIPR.					
OS Streptomyces sp.					
OS Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;					

Submitted (DEC-1998) to the EMBL/GenBank/DBJ databases.
EMBL: AF116668; AAF71088.1; B428ED1274CE81CD CRC64;
SEQUENCE 122 AA; 13695 MW; 13695 MW;

Query Match 23.1%; Score 56; DB 4; Length 122;
Best Local Similarity 36.6%; Pred. No. 2.6;
Matches 15; Conservative 6; Mismatches 8; Indels 12; Gaps 2;
6 QGPADI-----CQCCNKGDGCTPSHSRRORPHVMSQMSRSVS 41
:|||||
32 RGPADSSSHAFKLC-----FPSHCRRPPWVISRKGRIN 65

Search completed: January 10, 2002, 11:23:28
Job time: 184 sec

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: January 10, 2002, 11:19:49 ; Search time 13.45 Seconds
(without alignments)
232.205 Million cell updates/sec

Title: US-09-252-828A-2
Perfect score: 242
Sequence: 1 SWPVPVGPADICCCCKNGDC.....TPSHSRPQHVMSQMSRSVS 41

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 219241 seqs, 76174552 residues

Total number of hits satisfying chosen parameters: 219241

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database :
1: PIR68:*
2: PIR1:*
3: PIR3:*
4: PIR4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	235	97.1	424	1 A36000	sperm-binding glyco
2	217	89.7	210	2 A56844	POM-2P3 protein -
3	151	62.4	426	3 S70396	zona pellucida gly
4	143	59.1	422	1 A60503	sperm-binding glyco
5	136	56.2	424	2 S70399	zona pellucida gly
6	126	52.1	424	1 A30334	sperm-binding glyco
7	119	49.2	421	1 S70433	zona pellucida gly
8	109	45.0	421	1 S70402	zona pellucida gly
9	100	41.3	415	2 S70401	zona pellucida gly
10	98	40.5	44	2 B44365	sperm receptor lig
11	60.5	25.0	99	2 B82720	hypothetical prote
12	59	24.4	58	2 S35573	zona pellucida gly
13	59	24.4	999	1 IJH063	desmoglein 3 precu
14	58.5	24.2	357	2 S09269	protein YBR056w-a
15	58	24.0	66	2 S78705	ig alpha chain C r
16	56.5	23.3	819	2 G81698	leucyl-tRNA synthe
17	56	23.1	447	2 JEO337	frizzled-1 protein
18	55.5	22.9	436	2 JN0591	serotonin receptor
19	55	22.7	641	2 A45054	probable intercell
20	55	22.7	858	2 T08881	prominin - mouse
21	55	22.7	865	2 T09050	AC133 antigen - hu
22	54.5	22.5	424	2 S52847	egg membrane prote
23	54.5	22.5	735	2 I48101	ADAM 6 protein pre
24	54	22.3	202	2 A33176	P21 protein - soyb
25	54	22.3	477	2 A47236	zinc-finger protei
26	54	22.3	494	2 A42170	zinc finger protei
27	53.5	22.1	497	2 JC5076	myc-associated zin
28	53.5	22.1	351	2 C72508	hypothetical prote
29	53.5	22.1	379	2 H96696	protein FIN1.16 l

30	53.5	22.1	738	2 T00343	hypothetical prote
31	53	21.9	197	2 I46413	keratin KAP5.5 - s
32	53	21.9	563	2 T47520	hypothetical prote
33	52.5	21.7	447	2 S39505	translation elonga
34	52.5	21.7	447	2 S17434	translation elonga
35	52.5	21.7	447	2 JS0719	translation elonga
36	52.5	21.7	447	2 JC1454	translation elonga
37	52.5	21.7	447	2 S66339	translation elonga
38	52.5	21.7	448	2 S10507	translation elonga
39	52.5	21.7	449	2 S08534	translation elonga
40	52.5	21.7	449	2 S06724	translation elonga
41	52.5	21.7	449	2 S21989	translation elonga
42	52.5	21.7	967	2 F86214	protein T6D2.2 [i
43	52	21.5	127	2 T08097	osmotin - sweet or
44	51.5	21.3	339	2 F8614	phenylalanine tRNA
45	51.5	21.3	339	2 B72011	phenylalanine--trn

ALIGNMENTS

RESULT 1
A36000
sperm-binding glycoprotein zp3 precursor - human
N:Alternate names: sperm receptor zp3; zona pellucida glycoprotein zp3
C:Species: Homo sapiens (man)
C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C:Accession: A36000; A44365
R:Chamberlin, M.E.; Dean, J.
Proc. Natl. Acad. Sci. U.S.A. 87, 6014-6018, 1990
A>Title: Human homolog of the mouse sperm receptor.
A:Reference number: A36000; MUID:90349545
A:Accession: A36000
A:Molecule type: mRNA; DNA
A:Residues: 1-424 <CH>
A:Cross-references: GB:M60504; GB:M35109; NID:G340491; PIDN:AA61336.1; PID:G340492
R:Van Duin, M.; Polman, J.E.; Verkoelen, C.C.; Bunschoten, H.; Meyerink, J.H.; Olijve
Genomics 14, 1064-1070, 1992
A>Title: Cloning and characterization of the human sperm receptor ligand zp3: evidence
A:Reference number: A44365; MUID:93122771
A:Accession: A44365
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 329-370, 'S', 372-424 <VAN>

A:Experimental source: ovary
A>Note: sequence inconsistent with the nucleotide translation
A:Note: sequence extracted from NCBI backbone (NCBIN:122391, NCBI:122392)
C:Comment: This sulfated glycoprotein in the zona pellucida of the oocyte is a recept
C:Genetics:
A:Gene: GDB:ZP3A
A:Cross-references: GDB:128007; OMIM:182889
A:Map position: 7pter-7qter
C:Superfamily: sperm-binding glycoprotein zp3; zp domain homology
C:Keywords: glycoprotein; oocyte; receptor; sulfoprotein; transmembrane protein
F.1-22/Domain: signal sequence #status predicted <SIG>
F.23-424/Product: sperm-binding glycoprotein zp3 #status predicted <MAT>
F.45-301/Domain: zp domain homology <ZPH>

Query Match 97.1% Score 235; DB 1; Length 424;
Best Local Similarity 95.1% Pred. No. 1.2e-20;
Matches 39; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWPVPVGPADICCCCKNGDCGTPSHSRPQHVMSQMSRSVS 41
-DB 308 SWPVPVGPADICCCCKNGDCGTPSHSRPQHVMSQMSRSVS 348

RESULT 2
A56844
POM-2P3 protein - human
C:Species: Homo sapiens (man)
C>Date: 19-Oct-1995 #sequence_revision 19-Oct-1995 #text_change 05-Nov-1999

C:Accession: A56844
 R:Kipeszczok, S.; Osawa, G.A.; Liang, L.; Modi, W.S.; Dean, J.
 Genomics 25, 354-359, 1995
 A:Title: POM-2P3, a bisartite transcript derived from human ZP3 and a POM121 homologue.
 A:Reference number: A56844; MUID:95309900
 A:Accession: A56844
 A>Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-210 <RIP>
 A:Cross-references: GB:010099; NID:g607803; PIDN:AAA85788.1; PID:g607804

Query Match 89.7%; Score 217; DB 2; Length 210;
 Best Local Similarity 87.8%; Pred. No. 9,7e-19;
 Matches 36; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

OY 1 SWPVGADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
 DB 146 SWPVEGADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 186

RESULT 3
 570396
 zona pellucida glycoprotein C - dog
 C:Species: Canis lupus familiaris (dog)
 C>Date: 28-Oct-1996 #sequence_revision 27-Feb-1997 #text_change 20-Aug-1999
 C:Accession: S70396
 R:Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu, K.T.; Yurewicz, E.C.; Sacco, A.G.
 DNA Seq. 4, 361-393, 1994
 A:Title: Cloning and characterization of zona pellucida genes and cDNAs from a variety of
 A:Reference number: S70396; MUID:95143578
 A:Accession: S70396
 A>Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-426 <HAR>
 A:Cross-references: EMBL:U05780; NID:g458276; PIDN:AAA74387.1; PID:g458277
 C:Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
 F:43-299/Domain: ZP domain homology <ZPH>

Query Match 62.4%; Score 151; DB 2; Length 426;
 Best Local Similarity 60.0%; Pred. No. 1.2e-10;
 Matches 24; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

OY 2 WFPVQPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
 DB 307 WFPVGSADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 346

RESULT 4
 A60503
 sperm-binding glycoprotein ZP3 precursor - golden hamster
 N:Alternate names: sperm receptor; zona pellucida glycoprotein ZP3
 C:Species: Mesocricetus auratus (golden hamster)
 C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
 C:Accession: A60503
 R:Kinloch, R.A.; Ruiz-Seller, B.; Wassarman, P.M.
 Dev. Biol. 142, 414-421, 1990
 A:Title: Genomic organization and polypeptide primary structure of zona pellucida glycop
 A:Reference number: A60503; MUID:91078540
 A:Accession: A60503
 A:Molecule type: DNA
 A:Residues: 1-422 <KIN>
 A:Cross-references: GB:M63629
 A>Note: the authors translated the codon CAA for residue 251 as Glu, and AGC for residue
 C:Comment: This sulfated glycoprotein in the zona pellucida of the oocyte is a receptor
 C:Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
 C:Keywords: glycoprotein; oocyte
 F:45-300/Domain: ZP domain homology <ZPH>

Query Match 59.1%; Score 143; DB 1; Length 422;
 Best Local Similarity 56.1%; Pred. No. 1e-09;

Matches 23; Conservative 7; Mismatches 11; Indels 0; Gaps 0;
 OY 1 SWPVGADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
 DB 307 SWPVEGADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 347

RESULT 5
 570399
 zona pellucida glycoprotein C - cat
 C:Species: Felis silvestris catus (domestic cat)
 C>Date: 28-Oct-1996 #sequence_revision 27-Feb-1997 #text_change 20-Aug-1999
 C:Accession: S70399
 R:Harris, J.D.; Hibler, D.W.; Fontenot, G.K.; Hsu, K.T.; Yurewicz, E.C.; Sacco, A.G.
 DNA Seq. 4, 361-393, 1994
 A:Title: Cloning and characterization of zona pellucida genes and cDNAs from a variet
 A:Reference number: S70396; MUID:95143578
 A:Accession: S70399
 A>Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-424 <HAR>
 A:Cross-references: EMBL:U05778; NID:g458272; PIDN:AAA74390.1; PID:g458273
 C:Superfamily: sperm-binding glycoprotein ZP3; ZP domain homology
 F:43-299/Domain: ZP domain homology <ZPH>

Query Match 56.2%; Score 136; DB 2; Length 424;
 Best Local Similarity 55.0%; Pred. No. 7.1e-09;
 Matches 22; Conservative 3; Mismatches 15; Indels 0; Gaps 0;

OY 2 WFPVQPADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 41
 DB 307 WFPVEGADICCCCKGDCGTPSHSRQPHVMSQMSRSVS 346

RESULT 6
 A30334
 sperm-binding glycoprotein ZP3 precursor - mouse
 N:Alternate names: sperm receptor; zona pellucida glycoprotein ZP3; ZP3 glycoprotein
 C:Species: Mus musculus (house mouse)
 C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
 C:Accession: A30334; S04189; A31232; A48823
 R:Ringuette, M.J.; Chamberlin, M.E.; Baur, A.W.; Sobieski, D.A.; Dean, J.
 Dev. Biol. 127, 287-295, 1988
 A:Title: Molecular analysis of cDNA coding for ZP3, a sperm binding protein of the mo
 A:Reference number: A30334; MUID:88242926
 A:Accession: A30334
 A:Molecule type: DNA; mRNA
 A:Residues: 1-424 <RIN>
 A:Cross-references: GB:M20026; NID:g1663713; PIDN:AAI8629.1; PID:g1663714
 R:Kinloch, R.A.; Wassarman, P.M.
 Nucleic Acids Res. 17, 2861-2863, 1989
 A:Title: Nucleotide sequence of the gene encoding zona pellucida glycoprotein ZP3 - t
 A:Reference number: S04189; MUID:89240048
 A:Accession: S04189
 A>Status: translation not shown
 A:Molecule type: DNA
 A:Residues: 1-423 <KIN>
 A:Cross-references: EMBL:X14376
 R:Kinloch, R.A.; Roller, R.T.; Fimiani, C.M.; Wassarman, D.A.; Wassarman, P.M.
 Proc. Natl. Acad. Sci. U.S.A. 85, 6405-6413, 1988
 A:Title: Primary structure of the mouse sperm receptor polypeptide determined by geno
 A:Reference number: A31232; MUID:88320451
 A:Accession: A31232
 A>Status: not compared with conceptual translation
 A:Molecule type: DNA
 A:Residues: 1-152, 'E', 154-252, 'E', 254-424 <KIN>
 A:Cross-references: EMBL:J03851
 R:Rosiere, T.K.; Wassarman, P.M.
 Dev. Biol. 154, 309-317, 1992
 A:Title: Identification of a region of mouse zona pellucida glycoprotein mZP3 that po
 A:Reference number: A48823; MUID:93050795
 A:Accession: A48823

A:Reference number: A82515; MUID:20365717
A>Note: for a complete list of authors see reference number A59328 below
A:Accession: B82720
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-99 <SIM>
A:Cross-references: GB:AE003949; GB:AE003849; NID:q9106088; PIDN:AAF83949.1; GSPDB:GN001575
A:Experimental source: strain 945C
R:Simpon, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, R.; Brites, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carret, H. as-Neto, E.; Docena, C.; El-Dorri, H.; Facincani, A.P.; Ferreira, A.J.S.
Submitted to GenBank, June 2000
A:Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohman, J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Krumme, E.E.; Laigret, A.; Machado, M.A.; Madeira, A.M.B.N.; Madeira, H.M.F.; Marinho, C.L.; Marques, M.V.; Martins, B.A.; Martins, Martins, E.M.F.; Matsushima, A.Y.; Meick, C.F.M.; Mircoca, E.C.; Miyaki, C.Y.; Nogueira, F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri, D.A.; Rodrigues, V.; Rosa, A.C.R.; de Rosa Jr., V.E.; de Sa, R.G.; Santelli, R.V.; Sawasaki, M.; Tsubako, M.H.; Vallada, H.; Van Sluys, M.A.; Verjovski-Almeida, S.; Vettore, A.L.; Zucchi, M.A.
A:Reference number: A59328
A:Contents: annotation
C:Genetics:
J:Gene: XF1139

Query	12	CQCCNKGDCGTPSHSRPHVMSQ	35
		: : : : :	
Db	36	CRCAK-HCGLPESHSTRFPNIPEQ	58
		: : : : :	

Query Match 25.0%; Score 60.5; DB 2; Length 99;
 Best Local Similarity 45.88; Pred No. 2.1;
 Matches 11; Conservative 3; Mismatches 9; Indels 1; Gaps 1.

```

RESULT 12
S35573
zona pellucida glycoprotein beta chain - pig (fragments)
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 20-May-1994 #sequence_revision 30-Jan-1998 #text_change 07-May-1999
C:Accession: S35573
R:Roepier-Petersen, E.; Mann, K.; Calvete, J.J.
Biol. Chem. Hoppe-Seyler 374, 411-417, 1993
A:Title: Identification of porcine oocyte 55 kDa alpha and beta proteins within the zona
a pellucida proteins in different mammalian species.
A:Reference number: S35572; MUID:94030657
A:Accession: S35573
A:Molecule type: protein
A:Residues: 1-15;16-30;31-58 <TOE>
A:Experimental source: ovary
C:Superfamily: sperm binding glycoprotein ZP3; ZP domain homology
C:Keywords: glycoprotein; oocyte; receptor
F:1-30/Domain: ZP domain homology (fragments) <2PPI>

```

Query Match	24.4%	Score 59;	DB 2;	Length 58;
Best Local Similarity	69.2%;	Pred. No. 2.11;		
Matches	9;	Conservative	2;	Mismatches
			2;	Indels
				Gaps 0;
QY	2	WPPVGGPADICQC	14	
	46	WSPVGGPAVICRC	58	
bb				

```

RESULT 13
ID#063
desmoglein 3 precursor - human
M:Alternate names: pemphigus vulgaris antigen
C:Species: Homo sapiens (man)
C:Date: 30-Jun-1993 #sequence_revision 30-Jun-1993 #text_change 22-Jun-1999
C:Accession: A41088
R:Amagai, M.; Klaus-Kovtun, V.; Stanley, J.R.
Cell 67, 869-877, 1991

```

A:Title: Autoantibodies against a novel epithelial cadherin in pemphigus vulgaris, a
A:Reference number: A41088; MUID:92069753
A:Accession: A41088
A:Molecule type: mRNA
A:Residues: 1-999 <MA>
A:Cross-references: GB:M76482; NID:g190751; PIDN:AA60230.1; PID:g190752
C:Genetics:
A:Gene: GDB:DSG3
A:Cross-references: GDB:134030; OMIM:169615
A:Map position: 16q12.1-18q12.2
C:Superfamily: cadherin; cadherin repeat homology
C:Keywords: calcium binding; cell adhesion; duplication; glycoprotein; transmembrane
F:1-33/Domain: signal sequence #status predicted <SIG>
F:24-49/Domain: propeptide #status predicted <PRO>
F:50-999/Product: desmoglein homolog #status predicted <MAT>
F:50-615/Domain: extracellular #status predicted <EXT>
F:52-157/Domain: cadherin repeat homology <CR1>
F:160-267/Domain: cadherin repeat homology <CR2>
F:270-383/Domain: cadherin repeat homology <CR3>
F:390-495/Domain: cadherin repeat homology <CR4>
F:496-598/Domain: cadherin repeat homology <CR5>
F:616-659/Domain: transmembrane #status predicted <TM>
F:640-999/Domain: intracellular #status predicted <INT>
F:910-938/Domain: desmoglein repeat <DG1>
F:937-966/Domain: desmoglein repeat <DG2>
F:110,180,545/Binding site: carboxylate (Asn) (covalent) #status predicted

Query	10	DICCCCKGDCGT-----PSHSRQPH	31
Best Local Similarity	24.4%	Pred. 59;	DB 1;
Matches	11;	Conservative	4;
		Mismatches	7;
		Indels	6;
		Gaps	1;

```

RESULT 14
S09269
I9 alpha chain C region - rabbit (fragment)
C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 29-Jan-1993 #sequence_revision 29-Jan-1993 #text_change 16-Jul-1999
C:Accession: S09269
R:Burnett, R.C.; Hanly, W.C.; Zhai, S.K.; Knight, K.L.
EMBO J. 8, 4041-4047, 1989
A:Title: The Iga heavy-chain gene family in rabbit: cloning and sequence analysis of
A:Reference number: S09264; MUID:90076124
A:Accession: S09269
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-357 <BUP>
C:Superfamily: Immunoglobulin C region; immunoglobulin homology
C:Keywords: Immunoglobulin
C:142-208/Domain: immunoglobulin homology <IMM>

```

Query Match	24.2%	Score 58.5	DB 2	Length 357
Best Local Similarity	43.3%	Pred. NO.10		
Matches 13	Conservative 3	Mismatches 11	Indels 3	Gaps 2
QY	4	PVGGPAD--ICOC-CNKGDCCTPSHSRRQP	30	
db	105	PTPGSDTTTCCPCPCSPSCGEPSTLSQRP	134	

RESULT 15
S78705
protein YBR056w-a - yeast (*Saccharomyces cerevisiae*)
C.Species: *Saccharomyces cerevisiae*
C.Date: 15-Jan-1999 #sequence_revision 15-Jan-1999 #text_change 15-Jan-1999
C.Accession: S78705
R.Ailjovic, G.; Pohl, F.M.; Pohl, T.M.
Submitted to the Protein Sequence Database, August 1994

A:Reference number: S45906
 A:Accession: S78705
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-66 <ALT>
 A:Cross-references: EMBL:Z35925; MIPS:YBR056w-a
 A:Experimental source: strain S288C
 C:Genetics:
 A:Map position: 2R

Query Match 24.0%; Score 58; DB 2; Length 66;
 Best Local Similarity 57.9%; Pred. No. 3.1;
 Matches 11; Conservative 0; Mismatches 4; Indels 4; Gaps 1;
 OX 6 QGPA----DICCCNKGDC 20
 ||| | | | | | |
 DE 24 QGPPPRNDCCCCNCGDC 42

Search completed: January 10, 2002, 11:21:00
 Job time: 71 sec

THIS PAGE BLANK (USPTO)

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OW protein - protein search, using sw model

Run on: January 10, 2002, 11:19:49 ; Search time 11.74 Seconds
(Without alignments)
118.044 Million cell updates/sec

Title: US-09-252-828A-2

Perfect score: 242
Sequence: 1 SWFVQGGADICCCCKNGDC.....TPSHKRPWMSQMSRSVS 41

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 155098 seqs, 33800819 residues

Total number of hits satisfying chosen parameters: 155098

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Pending_Patents_AA.New:*
1: /cgn2_6/ptodata/1/paa/PCN_NEW_COMB.pep:*
2: /cgn2_6/ptodata/1/paa/US06_NEW_COMB.pep:*
3: /cgn2_6/ptodata/1/paa/US07_NEW_COMB.pep:*
4: /cgn2_6/ptodata/1/paa/US08_NEW_COMB.pep:*
5: /cgn2_6/ptodata/1/paa/US09_NEW_COMB.pep:*
6: /cgn2_6/ptodata/1/paa/US10_NEW_COMB.pep:*
7: /cgn2_6/ptodata/1/paa/US60_NEW_COMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length DB	ID	Description
1	53.5	22.1	251	US-09-708-427-13464	Sequence 13464, A
2	53.5	22.1	296	US-09-708-427-13463	Sequence 13463, A
3	53.5	22.1	379	US-09-708-427-13462	Sequence 13462, A
4	53	21.9	165	US-09-708-427-80144	Sequence 80144, A
5	53	21.9	186	US-09-708-427-80143	Sequence 80143, A
6	53	21.9	210	US-09-708-427-80142	Sequence 80142, A
7	53	21.9	406	US-09-897-516-6739	Sequence 6739, AP
8	52.5	21.7	174	US-09-620-394B-4805	Sequence 4805, AP
9	52.5	21.7	227	US-09-620-394B-4804	Sequence 4804, AP
10	52.5	21.7	275	US-09-620-394B-4803	Sequence 4803, AP
11	52.5	21.7	348	US-09-620-394B-4932	Sequence 4932, AP
12	52.5	21.7	348	US-09-620-394B-4932	Sequence 4932, AP
13	52.5	21.7	348	US-09-708-427-22243	Sequence 22243, A
14	52.5	21.7	348	US-09-708-427-22247	Sequence 22247, A
15	52.5	21.7	399	US-09-708-427-58535	Sequence 58535, A
16	52.5	21.7	401	US-09-620-394B-3365	Sequence 3365, AP
17	52.5	21.7	401	US-09-620-394B-4931	Sequence 4931, AP
18	52.5	21.7	401	US-09-708-427-22239	Sequence 22239, A
19	52.5	21.7	401	US-09-708-427-22242	Sequence 22242, A
20	52.5	21.7	401	US-09-708-427-22246	Sequence 22246, A
21	52.5	21.7	447	US-09-708-427-58534	Sequence 58534, A
22	52.5	21.7	449	US-09-620-394B-3364	Sequence 3364, AP
23	52.5	21.7	449	US-09-620-394B-4930	Sequence 4930, AP
24	52.5	21.7	449	US-09-708-427-22238	Sequence 22238, A
25	52.5	21.7	449	US-09-708-427-22241	Sequence 22241, A
26	52.5	21.7	449	US-09-708-427-22245	Sequence 22245, A

27	52.5	21.7	457	US-09-708-427-22237	Sequence 22237, A
28	52.5	21.7	484	US-09-708-427-58533	Sequence 58533, A
29	50.5	20.9	672	PCT-US01-27760-524	Sequence 524, App
30	50.5	20.9	672	PCT-US01-27760A-524	Sequence 524, App
31	50	20.7	170	US-09-708-427-70619	Sequence 70619, A
32	50	20.7	172	US-09-708-427-70619	Sequence 70620, A
33	50	20.7	204	US-09-708-427-82646	Sequence 82646, A
34	50	20.7	488	US-09-708-427-63568	Sequence 63568, A
35	50	20.7	535	US-09-708-427-85201	Sequence 85201, A
36	50	20.7	536	US-09-708-427-85199	Sequence 85199, A
37	50	20.7	565	US-09-708-427-85199	Sequence 85199, A
38	49.5	20.5	124	US-09-828-792-868	Sequence 868, App
39	49.5	20.5	154	US-09-828-792-987	Sequence 987, App
40	49.5	20.5	166	US-09-828-792-987	Sequence 987, App
41	49.5	20.5	453	US-09-989-723-73	Sequence 73, Appl
42	49.5	20.5	453	US-09-989-723-73	Sequence 73, Appl
43	49.5	20.5	453	US-09-989-730-73	Sequence 73, Appl
44	49.5	20.5	453	US-09-990-436-73	Sequence 73, Appl
45	49.5	20.5	453	US-09-997-641-73	Sequence 73, Appl

ALIGNMENTS

```

RESULT 1
US-09-708-427-13464
; Sequence 13464, Application US/09708427
; GENERAL INFORMATION:
; APPLICANT: N. ALEXANDROV et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTID
; FILE OF INVENTION: THEREBY
; FILE REFERENCE: 2750-1243P
; CURRENT APPLICATION NUMBER: US/09/708,427
; CURRENT FILING DATE: 2000-11-09
; NUMBER OF SEQ ID NOS: 85364
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 13464
; LENGTH: 251
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: 1..251
; NAME/KEY: misc.feature
; LOCATION: 1..251
; OTHER INFORMATION: Ceres Seq. ID 1826393
; OTHER INFORMATION:
US-09-708-427-13464

Query Match 22.1%; Score 53.5; DB 5; Length 251;
Best local Similarity 32.3%; Pred. No. 15;
Matches 10; Conservative 5; Mismatches 13; Indels 3; Gaps 1;

QY 2 WFPVQGGADICCCCKNGDCGPPSHSRQ 29
DB 158 WFAVRGGDPCDGLRCLSHAGCGPRTKRHE 188

RESULT 2
US-09-708-427-13463
; Sequence 13463, Application US/09708427
; GENERAL INFORMATION:
; APPLICANT: N. ALEXANDROV et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTID
; FILE OF INVENTION: THEREBY
; FILE REFERENCE: 2750-1243P
; CURRENT APPLICATION NUMBER: US/09/708,427
; CURRENT FILING DATE: 2000-11-09
; NUMBER OF SEQ ID NOS: 85364
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 13463
; LENGTH: 296

```


NAME/KEY: misc_feature
LOCATION: 1..210
OTHER INFORMATION: Ceres Seq. ID 1959921
US-09-708-427-80142

Query Match 21.9%; Score 53; DB 5; Length 210;
Best Local Similarity 30.3%; Pred. No. 15;
Matches 10; Conservative 8; Mismatches 15; Indels 0; Gaps 0;

QY 5 VQGPADICCCNKGDCGTPSHSRQPHVMSQWS 37
DB 63 VQDAYVLCRVFHKNNIGPPSGNRKYPFMEEEWA 95

RESULT 7
US-09-897-516-6739
Sequence 6739, Application US/09897516
GENERAL INFORMATION:
APPLICANT: Corbin, David R.
APPLICANT: Goldman, Barry S.
APPLICANT: Hinkle, Gregory J.
APPLICANT: Huesing, Joseph E.
APPLICANT: Krasomil-Osterfeld, Karina C.
APPLICANT: Malvar, Thomas M.
APPLICANT: Slater, Steven C.
APPLICANT: Spiridonov, Sergei
TITLE OF INVENTION: Xenorhabdus sp. Genome Sequences And Uses Thereof
FILE REFERENCE: 38-21(51847)B
CURRENT APPLICATION NUMBER: US/09/897,516
CURRENT FILING DATE: 2001-06-29
PRIOR APPLICATION NUMBER: US 60/215, 161
PRIOR FILING DATE: 2000-06-30
NUMBER OF SEQ ID NOS: 8409
SEQ ID NO 6739
LENGTH: 406
TYPE: PRT
ORGANISM: Xenorhabdus sp.
US-09-897-516-6739

Query Match 21.9%; Score 53; DB 5; Length 406;
Best Local Similarity 28.9%; Pred. No. 25;
Matches 13; Conservative 7; Mismatches 13; Indels 12; Gaps 3;

QY 5 VQGPADICCCNKGDCGTPSHSRQPHVMSQWSRSV 40
DB 216 IQG-VRLQCCTAILPQCKHQCPRCHSKGHARR--HSLQWTMAL 257

RESULT 8
US-09-620-394B-4805
Sequence 4805, Application US/09620394B
GENERAL INFORMATION:
APPLICANT: ALEXANDROV, Nickolai
APPLICANT: BROVER, Vyacheslav
TITLE OF INVENTION: Sequence-determined DNA Fragments and Corresponding Polypeptides
FILE REFERENCE: 2750-1067P
CURRENT APPLICATION NUMBER: US/09/620,394B
CURRENT FILING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 9131
SEQ ID NO 4805
LENGTH: 174
TYPE: PRT
ORGANISM: Arabidopsis thaliana
FEATURE:
NAME/KEY: misc_feature
LOCATION: 1..174
OTHER INFORMATION: Xaa is any amino acid
NAME/KEY: misc_feature
LOCATION: 1..174
OTHER INFORMATION: Ceres Seq. ID 1393412

US-09-620-394B-4805

Query Match 21.7%; Score 52.5; DB 5; Length 174;
Best Local Similarity 58.8%; Pred. No. 15;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

QY 11 ICOCNKGDCGTPSHSR 27
DB 48 IC-CCNKMADATTPKYSK 63

RESULT 9
US-09-620-394B-4804
Sequence 4804, Application US/09620394B
GENERAL INFORMATION:
APPLICANT: ALEXANDROV, Nickolai
APPLICANT: BROVER, Vyacheslav
TITLE OF INVENTION: Sequence-determined DNA Fragments and Corresponding Polypeptid
FILE REFERENCE: 2750-1067P
CURRENT APPLICATION NUMBER: US/09/620,394B
CURRENT FILING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 9131
SEQ ID NO 4804
LENGTH: 227
TYPE: PRT
ORGANISM: Arabidopsis thaliana
FEATURE:
NAME/KEY: misc_feature
LOCATION: 1..227
OTHER INFORMATION: Xaa is any amino acid
NAME/KEY: misc_feature
LOCATION: 1..227
OTHER INFORMATION: Ceres Seq. ID 1393411
US-09-620-394B-4804

Query Match 21.7%; Score 52.5; DB 5; Length 227;
Best Local Similarity 58.8%; Pred. No. 18;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

QY 11 ICOCNKGDCGTPSHSR 27
DB 101 IC-CCNKMADATTPKYSK 116

RESULT 10
US-09-620-394B-4803
Sequence 4803, Application US/09620394B
GENERAL INFORMATION:
APPLICANT: ALEXANDROV, Nickolai
APPLICANT: BROVER, Vyacheslav
TITLE OF INVENTION: Sequence-determined DNA Fragments and Corresponding Polypeptid
FILE REFERENCE: 2750-1067P
CURRENT APPLICATION NUMBER: US/09/620,394B
CURRENT FILING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 9131
SEQ ID NO 4803
LENGTH: 275
TYPE: PRT
ORGANISM: Arabidopsis thaliana
FEATURE:
NAME/KEY: misc_feature
LOCATION: 1..275
OTHER INFORMATION: Xaa is any amino acid
NAME/KEY: misc_feature
LOCATION: 1..275
OTHER INFORMATION: Ceres Seq. ID 1393410
US-09-620-394B-4803

Query Match 21.7%; Score 52.5; DB 5; Length 275;
Best Local Similarity 58.8%; Pred. No. 21;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;
OY 11 ICQCCNKGDGCTPSHSR 27
|| |||| | || :|
Db 149 IC-CCNKMDATTPKYSK 164

RESULT 11
US-09-620-394B-3366
; Sequence 3366, Application US/09620394B
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nikolai
; TITLE OF INVENTION: Sequence-Determined DNA Fragments and Corresponding Polypeptides
; FILE REFERENCE: 2750-1067P
; CURRENT APPLICATION NUMBER: US/09/620,394B
; CURRENT FILING DATE: 2000-07-21
; NUMBER OF SEQ ID NOS: 9131
; SEQ ID NO 3366
; LENGTH: 348
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Xaa is any amino acid
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Ceres Seq. ID 1385984
US-09-620-394B-3366

Query Match 21.7%; Score 52.5; DB 5; Length 348;
Best Local Similarity 58.8%; Pred. No. 26;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

OY 11 ICQCCNKGDGCTPSHSR 27
|| |||| | || :|
Db 48 IC-CCNKMDATTPKYSK 63

RESULT 12
US-09-620-394B-4932
; Sequence 4932, Application US/09620394B
; GENERAL INFORMATION:
; APPLICANT: ALEXANDROV, Nikolai
; TITLE OF INVENTION: Sequence-Determined DNA Fragments and Corresponding Polypeptides
; FILE REFERENCE: 2750-1067P
; CURRENT APPLICATION NUMBER: US/09/620,394B
; CURRENT FILING DATE: 2000-07-21
; NUMBER OF SEQ ID NOS: 9131
; SEQ ID NO 4932
; LENGTH: 348
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Xaa is any amino acid
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Ceres Seq. ID 1393683
US-09-620-394B-4932

Query Match 21.7%; Score 52.5; DB 5; Length 348;
Best Local Similarity 58.8%; Pred. No. 26;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

OY 11 ICQCCNKGDGCTPSHSR 27
|| |||| | || :|
Db 48 IC-CCNKMDATTPKYSK 63

RESULT 13
US-09-708-427-22243
; Sequence 22243, Application US/09708427
; GENERAL INFORMATION:
; APPLICANT: N. ALEXANDROV et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTID
; FILE REFERENCE: 2750-1243P
; CURRENT APPLICATION NUMBER: US/09/708,427
; CURRENT FILING DATE: 2000-11-09
; NUMBER OF SEQ ID NOS: 85364
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 22243
; LENGTH: 348
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Xaa is any amino acid
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Ceres Seq. ID 1840642
US-09-708-427-22243

Query Match 21.7%; Score 52.5; DB 5; Length 348;
Best Local Similarity 58.8%; Pred. No. 26;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

OY 11 ICQCCNKGDGCTPSHSR 27
|| |||| | || :|
Db 48 IC-CCNKMDATTPKYSK 63

RESULT 14
US-09-708-427-22247
; Sequence 22247, Application US/09708427
; GENERAL INFORMATION:
; APPLICANT: N. ALEXANDROV et al.
; TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTID
; FILE REFERENCE: 2750-1243P
; CURRENT APPLICATION NUMBER: US/09/708,427
; CURRENT FILING DATE: 2000-11-09
; NUMBER OF SEQ ID NOS: 85364
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 22247
; LENGTH: 348
; TYPE: PRT
; ORGANISM: Arabidopsis thaliana
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Xaa is any amino acid
; NAME/KEY: misc_feature
; LOCATION: 1..348
; OTHER INFORMATION: Ceres Seq. ID 1840646
US-09-708-427-22247

Query Match 21.7%; Score 52.5; DB 5; Length 348;
Best Local Similarity 58.8%; Pred. No. 26;
Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

OY 11 ICQCCNKGDGCTPSHSR 27
|| |||| | || :|

DJ 48 IC-CCNKMDDATTPKYSK 63

RESULT 15

US-09-708-427-58535
 , Sequence 58535, Application US/09708427
 , GENERAL INFORMATION:
 , APPLICANT: N. ALEXANDROV et al.
 , TITLE OF INVENTION: SEQUENCE-DETERMINED DNA FRAGMENTS AND CORRESPONDING POLYPEPTIDES
 , FILE REFERENCE: 2750-1243P
 , CURRENT APPLICATION NUMBER: US/09/708,427
 , CURRENT FILING DATE: 2000-11-09
 , NUMBER OF SEQ ID NOS: 85364
 , SOFTWARE: PatentIn version 3.1
 , SEQ ID NO 58535
 , LENGTH: 399
 , TYPE: PRT
 , ORGANISM: Zea mays subsp. mays
 , FEATURE:
 , NAME/KEY: misc feature
 , LOCATION: 1..399
 , OTHER INFORMATION: Xaa is any amino acid
 , NAME/KEY: misc feature
 , LOCATION: 1..399
 , OTHER INFORMATION: Ceres Seq. ID 1942127
 US-09-708-427-58535

Query Match 21.7%; Score 52.5; DB 5; Length 399;

Best local Similarity 58.8%; Pred. No. 28;
 Matches 10; Conservative 2; Mismatches 4; Indels 1; Gaps 1;

QY 11 ICOCCKNGDCGTPSHSR 27
 11 11111 11 :1:
 Db 101 IC-CCNKMDDATTPKYSK 116

Search completed: January 10, 2002, 11:21:19
 Job time: 90 sec

THIS PAGE BLANK (USPTO)


```

REFERENCE/DOCKET NUMBER: 31096
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/346-5750
TELEFAX: 312/984-9740
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 426 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-259-580-12

Query Match          62.4%; Score 151; DB 6; Length 426;
Best Local Similarity 60.0%; Pred. No. 3, 2e-09;
Matches 24; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

OY      2 WEPVQPADTCCCKNKGDCGTPSHSRQPIVMSQMSRVS 41
       1:1:1 111111111 11 111 1: 1:111
Db      307 WYPEGADICRCCKNGSGLPGRSRLSHLERWKRVS 346

RESULT 13
US-08-332-503-12
Sequence 12, Application US/08332503
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: DNA SEQUENCES ENCODING MAMMALIAN ZONA
TITLE OF INVENTION: PELUCIDA PROTEINS
NUMBER OF SEQUENCES: 39
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray &
ADDRESSEE: Bicknell
STREET: 20 South Clark Street
CITY: Chicago
STATE: Illinois
COUNTRY: USA
ZIP: 60603
COMPUTER READABLE FORM:
MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/332,503
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/973,341
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Borun, Michael F.
REGISTRATION NUMBER: 25,497
REFERENCE/DOCKET NUMBER: 31096
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/346-5750
TELEFAX: 312/984-9740
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 12:
SEQUENCE CHARACTERISTICS:
LENGTH: 426 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-332-503-12

Query Match          62.4%; Score 151; DB 7; Length 426;
Best Local Similarity 60.0%; Pred. No. 3, 2e-09;
Matches 24; Conservative 5; Mismatches 11; Indels 0; Gaps 0;

```

[illegible]

LENGTH: 223 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
CT-US93-10851-49

Query Match 93.4% Score 226; DB 1; Length 223;
Best Local Similarity 90.2%; Pred. No. 2.8e-18;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

1 SWPVGADICCCCKNGDGTSPHSRQPHVMSQMSRSVS 41
|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 107 SWPVGADICCCCKNGDGTSPHSRQPHVMSQMSRSVS 147

RESULT 6
US-08-480-444B-49
Sequence 49, Application US/08480444B
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunoccontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentln Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,444B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,223
FILING DATE: 09-NOV-1993
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:
SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-480-444B-49

Query Match 93.4% Score 226; DB 8; Length 223;
Best Local Similarity 90.2%; Pred. No. 2.8e-18;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
1 SWPVGADICCCCKNGDGTSPHSRQPHVMSQMSRSVS 41
|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 107 SWPVGADICCCCKNGDGTSPHSRQPHVMSQMSRSVS 147

RESULT 7
US-08-480-673B-49
Sequence 49, Application US/08480673B
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Materials and Methods for Immunoccontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
ZIP: 60606-6402
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentln Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,673B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/149,223
FILING DATE: 09-NOV-1993
APPLICATION NUMBER: 08/012,990
FILING DATE: 29-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:
SEQUENCE CHARACTERISTICS:
LENGTH: 223 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-480-673B-49

Query Match 93.4% Score 226; DB 8; Length 223;
Best Local Similarity 90.2%; Pred. No. 2.8e-18;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

1 SWPVGADICCCCKNGDGTSPHSRQPHVMSQMSRSVS 41
|||||:|||||:|||||:|||||:|||||:|||||:|||||
Db 107 SWPVGADICCCCKNGDGTSPHSRQPHVMSQMSRSVS 147

RESULT 8
US-08-484-158A-49
Sequence 49, Application US/08484158A
GENERAL INFORMATION:
APPLICANT: Harris Ph.D., Jeffrey D.
APPLICANT: Hsu, Kuang T.
APPLICANT: Podolski, Joseph S.
TITLE OF INVENTION: Pharmaceutical Compositions for
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun

RESULT 2
US-09-252-828A-2
Sequence 2, Application US/09252828A
GENERAL INFORMATION:
APPLICANT: DONG, KE-WEN
APPLICANT: OEHNINGER, SERGIO
APPLICANT: GIBBONS, WILLIAM
TITLE OF INVENTION: RECOMBINANT, BIOLOGICALLY ACTIVE HUMAN ZONA PELLUCIDA
TITLE OF INVENTION: PROTEIN 3 (hZP3) TO TEST MALE FERTILITY
FILE REFERENCE: 024754/0114
CURRENT APPLICATION NUMBER: US/09/252,828A
CURRENT FILING DATE: 1999-02-19
NUMBER OF SEQ ID NOS: 5
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 2
LENGTH: 41
TYPE: PRT
ORGANISM: Homo sapiens
US-09-252-828A-2

Query Match 100.0%; Score 242; DB 16; Length 41;
Best Local Similarity 100.0%; Pred. No. 8,2e-21;
Matches 41; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 41
|||||
1 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 41

Db 1 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 41

RESULT 3
US-08-030-177-2
Sequence 2, Application US/08030177
GENERAL INFORMATION:
APPLICANT: van DUIN, Marcel
TITLE OF INVENTION: Human zona pellucida protein zp3
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Akzo Pharma
STREET: 1330-A Piccard Drive
CITY: Rockville
STATE: Maryland
COUNTRY: USA
ZIP: 20850-4377
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/030,177
FILING DATE: 26-MAR-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 90.202.287.0
FILING DATE: 27-AUG-1990
ATTORNEY/AGENT INFORMATION:
NAME: Blackstone, William M.
REGISTRATION NUMBER: 29,772
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 372 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-030-177-2

Query Match 94.6%; Score 229; DB 4; Length 372;
Best Local Similarity 92.7%; Pred. No. 2e-18;
Matches 38; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 41

|||||
Db 308 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 348

RESULT 4
US-09-720-282-2
Sequence 2, Application US/09720282
GENERAL INFORMATION:
APPLICANT: Herr, John
APPLICANT: Coonrod, Scott
TITLE OF INVENTION: EGG-SURFACE PROTEINS AND METHODS OF THEIR USE FOR MODULATING
TITLE OF INVENTION: FERTILITY
FILE REFERENCE: 9426-004-999
CURRENT APPLICATION NUMBER: US/09/720,282
CURRENT FILING DATE: 2001-01-18
PRIOR APPLICATION NUMBER: PCT/US99/13858
PRIOR FILING DATE: 1999-06-18
NUMBER OF SEQ ID NOS: 2
SOFTWARE: PatentIn version 3.0
SEQ ID NO 2
LENGTH: 372
TYPE: PRT
ORGANISM: Homo sapiens
US-09-720-282-2

Query Match 94.6%; Score 229; DB 21; Length 372;
Best Local Similarity 92.7%; Pred. No. 2e-18;
Matches 38; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 41
|||||
308 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 348

Db 308 SWFVVGPDADICCCCKNGDCGTPSHSRPHVMSQMSRSVS 348

RESULT 5
PCT-US93-10851-49
Sequence 49, Application PC/TUS9310851
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: Materials and Methods for Immunococontraception
NUMBER OF SEQUENCES: 59
CORRESPONDENCE ADDRESS:
ADDRESSEE: Marshall, O'Toole, Gerstein, Murray & Borun
STREET: 6300 Sears Tower, 233 South Wacker Drive
CITY: Chicago
STATE: Illinois
COUNTRY: United States of America
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/10851
FILING DATE: 09-NOV-1993
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/012,990
FILING DATE: 28-JAN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/973,341
FILING DATE: 09-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Clough, David W.
REGISTRATION NUMBER: 36,107
REFERENCE/DOCKET NUMBER: 31745
TELEPHONE: 312/474-6653
TELEFAX: 312/474-0448
TELEX: 25-3856
INFORMATION FOR SEQ ID NO: 49:
SEQUENCE CHARACTERISTICS:

GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.

DM protein - protein search, using sw model

Run on: January 10, 2002, 11:19:49 ; Search time 93.69 seconds
(without alignments)
121.506 Million cell updates/sec

File: US-09-252-828A-2

Perfect score: 242
Sequence: 1 SWFPVGPADICCCCKNGDC.....TPSHSRQPHVMSQMSRSVS 41

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 3148936 seqs, 27657034 residues
Total number of hits satisfying chosen parameters: 3148936

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Pending_Patents_AA_Main:*
1: /cgn2_6/ptodata/2/paa/PCRTUS_COMB.pep:*
2: /cgn2_6/ptodata/2/paa/US06_COMB.pep:*
3: /cgn2_6/ptodata/2/paa/US07_COMB.pep:*
4: /cgn2_6/ptodata/2/paa/US080_COMB.pep:*
5: /cgn2_6/ptodata/2/paa/US081_COMB.pep:*
6: /cgn2_6/ptodata/2/paa/US082_COMB.pep:*
7: /cgn2_6/ptodata/2/paa/US083_COMB.pep:*
8: /cgn2_6/ptodata/2/paa/US084_COMB.pep:*
9: /cgn2_6/ptodata/2/paa/US085_COMB.pep:*
10: /cgn2_6/ptodata/2/paa/US086_COMB.pep:*
11: /cgn2_6/ptodata/2/paa/US087_COMB.pep:*
12: /cgn2_6/ptodata/2/paa/US088_COMB.pep:*
13: /cgn2_6/ptodata/2/paa/US089_COMB.pep:*
14: /cgn2_6/ptodata/2/paa/US090_COMB.pep:*
15: /cgn2_6/ptodata/2/paa/US091_COMB.pep:*
16: /cgn2_6/ptodata/2/paa/US092_COMB.pep:*
17: /cgn2_6/ptodata/2/paa/US093_COMB.pep:*
18: /cgn2_6/ptodata/2/paa/US094_COMB.pep:*
19: /cgn2_6/ptodata/2/paa/US095_COMB.pep:*
20: /cgn2_6/ptodata/2/paa/US096_COMB.pep:*
21: /cgn2_6/ptodata/2/paa/US097_COMB.pep:*
22: /cgn2_6/ptodata/2/paa/US098_COMB.pep:*
23: /cgn2_6/ptodata/2/paa/US099_COMB.pep:*
24: /cgn2_6/ptodata/2/paa/US60_COMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	242	100.0	41	16	US-09-252-828A-1
2	242	100.0	41	16	US-09-252-828A-2
3	229	94.6	372	4	US-08-030-177-2
4	229	94.6	372	21	US-09-720-382-2
5	226	93.4	223	1	PCT-US93-10851-49
6	226	93.4	223	8	US-08-480-444B-49
7	226	93.4	223	8	US-08-480-673B-49
8	226	93.4	223	8	US-08-484-158A-49
9	219.5	90.7	40	16	US-09-252-828A-1

10	151	62.4	426	1	PCT-US93-10851-12	Sequence 12, Appl
11	151	62.4	426	3	US-07-973-341-12	Sequence 12, Appl
12	151	62.4	426	6	US-08-259-580-12	Sequence 12, Appl
13	151	62.4	426	7	US-08-332-503-12	Sequence 12, Appl
14	151	62.4	426	8	US-08-480-444B-12	Sequence 12, Appl
15	151	62.4	426	8	US-08-480-673B-12	Sequence 12, Appl
16	151	62.4	426	8	US-08-484-158A-12	Sequence 12, Appl
17	136	56.2	424	1	PCT-US93-10851-18	Sequence 18, Appl
18	136	56.2	424	1	PCT-US93-10851-18	Sequence 18, Appl
19	136	56.2	424	6	US-08-259-580-18	Sequence 18, Appl
20	136	56.2	424	6	US-08-332-503-18	Sequence 18, Appl
21	136	56.2	424	8	US-08-480-444B-18	Sequence 18, Appl
22	136	56.2	424	8	US-08-480-673B-18	Sequence 18, Appl
23	136	56.2	424	8	US-08-484-158A-18	Sequence 18, Appl
24	129	53.3	41	16	US-09-252-828A-3	Sequence 2, Appl
25	129	53.3	41	16	US-09-252-828A-3	Sequence 3, Appl
26	119	49.2	421	3	PCT-US93-10851-6	Sequence 6, Appl
27	119	49.2	421	3	US-07-973-341-6	Sequence 6, Appl
28	119	49.2	421	6	US-08-259-580-6	Sequence 6, Appl
29	119	49.2	421	7	US-08-332-503-6	Sequence 6, Appl
30	119	49.2	421	8	US-08-480-444B-6	Sequence 6, Appl
31	119	49.2	421	8	US-08-480-673B-6	Sequence 6, Appl
32	119	49.2	421	8	US-08-484-158A-6	Sequence 6, Appl
33	109	45.0	421	1	PCT-US93-10851-24	Sequence 24, Appl
34	109	45.0	421	3	US-07-973-341-24	Sequence 24, Appl
35	109	45.0	421	6	US-08-259-580-24	Sequence 24, Appl
36	109	45.0	421	7	US-08-332-503-24	Sequence 24, Appl
37	109	45.0	421	8	US-08-480-444B-24	Sequence 24, Appl
38	109	45.0	421	8	US-08-480-673B-24	Sequence 24, Appl
39	109	45.0	421	8	US-08-484-158A-24	Sequence 24, Appl
40	106	43.8	18	4	US-08-030-177-7	Sequence 8, Appl
41	100	41.3	415	1	PCT-US93-10851-8	Sequence 8, Appl
42	100	41.3	415	3	US-07-973-341-8	Sequence 8, Appl
43	100	41.3	415	6	US-08-259-580-8	Sequence 8, Appl
44	100	41.3	415	7	US-08-332-503-8	Sequence 8, Appl
45	100	41.3	415	8	US-08-480-444B-8	Sequence 8, Appl

ALIGNMENTS

RESULT 1
US-09-252-828-1
; Sequence 1, Application US/09252828
; GENERAL INFORMATION:
; APPLICANT: DONG, Ke-Wen
; APPLICANT: GIBBONS, William E.
; TITLE OF INVENTION: RECOMBINANT, BIOLOGICALLY ACTIVE HUMAN ZONA PELLUCIDA
; FILE REFERENCE: 024754/0114
; CURRENT APPLICATION NUMBER: US/09/252,828
; EARLIER FILING DATE: 1999-02-19
; EARLIER APPLICATION NUMBER: US 60/075,079
; NUMBER OF SEQ ID NOS: 4
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1
; LENGTH: 41
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-252-828-1

Query Match 100.0%; Score 242; DB 16; Length 41;
Best Local Similarity 100.0%; Pred. No. 8.2e-21;
Matches 41; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 SWFPVGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41
DB 1 SWFPVGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41

GenCore version 4.5
Copyright (c) 1993 - 2000 CompuGen Ltd.

OWI protein - protein search, using sw model

Run on: January 10, 2002, 11:19:49 ; Search time 23.82 Seconds
(without alignments)
127.498 Million cell updates/sec

Title: US-09-252-828A-2

Perfect score: 242

Sequence: 1 SWFPGPAPICCCCKNGDC.....TPSHSRPHVMSQMSRSVS 41

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 522463 seqs, 74073290 residues

Total number of hits satisfying chosen parameters: 522463

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
1: A.Geneseq.1101.*
2: /SIDB8/gcgdata/geneseq/geneseq/AA1980.DAT.*
3: /SIDB8/gcgdata/geneseq/geneseq/AA1981.DAT.*
4: /SIDB8/gcgdata/geneseq/geneseq/AA1982.DAT.*
5: /SIDB8/gcgdata/geneseq/geneseq/AA1983.DAT.*
6: /SIDB8/gcgdata/geneseq/geneseq/AA1984.DAT.*
7: /SIDB8/gcgdata/geneseq/geneseq/AA1985.DAT.*
8: /SIDB8/gcgdata/geneseq/geneseq/AA1986.DAT.*
9: /SIDB8/gcgdata/geneseq/geneseq/AA1987.DAT.*
10: /SIDB8/gcgdata/geneseq/geneseq/AA1988.DAT.*
11: /SIDB8/gcgdata/geneseq/geneseq/AA1989.DAT.*
12: /SIDB8/gcgdata/geneseq/geneseq/AA1990.DAT.*
13: /SIDB8/gcgdata/geneseq/geneseq/AA1991.DAT.*
14: /SIDB8/gcgdata/geneseq/geneseq/AA1992.DAT.*
15: /SIDB8/gcgdata/geneseq/geneseq/AA1993.DAT.*
16: /SIDB8/gcgdata/geneseq/geneseq/AA1994.DAT.*
17: /SIDB8/gcgdata/geneseq/geneseq/AA1995.DAT.*
18: /SIDB8/gcgdata/geneseq/geneseq/AA1996.DAT.*
19: /SIDB8/gcgdata/geneseq/geneseq/AA1997.DAT.*
20: /SIDB8/gcgdata/geneseq/geneseq/AA1998.DAT.*
21: /SIDB8/gcgdata/geneseq/geneseq/AA1999.DAT.*
22: /SIDB8/gcgdata/geneseq/geneseq/AA2000.DAT.*
23: /SIDB8/gcgdata/geneseq/geneseq/AA2001.DAT.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result	Score	Query Match	Length	DB	ID	Description
1	242	100.0	41	20	AAV30214	Amino acids 308 to
2	235	97.1	424	21	AAV52988	Human zona pelluci
3	229	94.6	372	21	AAV67287	Human zona pelluci
4	226	93.4	223	15	AAV65552	Cynomolgus monkey
5	226	93.4	223	20	AAV42483	Cynomolgus monkey
6	226	93.4	223	20	AAV81820	M. cynomolgus zpc
7	226	93.4	223	21	AAV82218	Monkey zona pelluc
8	226	93.4	223	21	AAV52692	Cynomolgus monkey
9	226	93.4	223	21	AAV52183	Monkey zona pelluc
10	226	93.4	223	21	AAV52987	Cynomolgus monkey
11	225	93.0	372	13	AAV22239	Human ZP3. Homo s

12	192	79.3	424	15	AAV53498	Marmoset ZP3. Cal
13	151	62.4	426	15	AAV51199	Canine zona pelluc
14	151	62.4	426	20	AAV42472	Canine zona pelluc
15	151	62.4	426	20	AAV81809	Canine ZPC protein
16	151	62.4	426	21	AAV82207	Canine zona pelluc
17	151	62.4	426	21	AAV52681	Canine oocyte zona
18	151	62.4	426	21	AAV52172	Canine zona pelluc
19	151	62.4	426	21	AAV52976	Canine zona pelluc
20	140	57.9	426	15	AAV48068	CZF-3. Canis fami
21	137	56.6	261	15	AAV60165	Feline zona pelluc
22	137	56.6	424	15	AAV47198	Feline zona pelluc
23	136	56.2	424	15	AAV5202	Feline zona pelluc
24	136	56.2	424	20	AAV42475	Feline zona pelluc
25	136	56.2	424	20	AAV81812	Feline ZPC protein
26	136	56.2	424	21	AAV82210	Feline zona pelluc
27	136	56.2	424	21	AAV52684	Feline oocyte zona
28	136	56.2	424	21	AAV52175	Feline zona pelluc
29	136	56.2	424	21	AAV52979	Feline zona pelluc
30	126	52.1	424	11	AAV07058	Mouse ZP3 gene pro
31	119	49.2	258	14	AAV41004	Pig ZP3-3. Sus sc
32	119	49.2	258	15	AAV6951	Partial porcine zo
33	119	49.2	420	15	AAV6950	Porcine zona pellu
34	119	49.2	421	15	AAV5196	Porcine zona pellu
35	119	49.2	421	20	AAV42469	Porcine zona pellu
36	119	49.2	421	20	AAV81806	Porcine ZPC protei
37	119	49.2	421	21	AAV82204	Porcine zona pellu
38	119	49.2	421	21	AAV52678	Porcine oocyte zon
39	119	49.2	421	21	AAV52169	Porcine zona pellu
40	119	49.2	421	21	AAV52973	Porcine zona pellu
41	109	45.0	421	15	AAV5205	Bovine zona pelluc
42	109	45.0	421	20	AAV42478	Bovine zona pelluc
43	109	45.0	421	20	AAV81815	Bovine ZPC protein
44	109	45.0	421	21	AAV82213	Bovine zona pelluc
45	109	45.0	421	21	AAV52687	Bovine oocyte zona

ALIGNMENTS

RESULT 1
ID AAV30214 standard; peptide: 41 AA.
XX AC AAV30214;
XX DT 01-NOV-1999 (first entry)
XX DE Amino acids 308 to 348 of human zona pellucida protein 3 (hzp3).
XX KW Human; zona pellucida protein 3; hzp3; glycoprotein; human spermatozoa;
XX KM acrosome reaction; fertility; sperm motility; fertilization.
XX OS Homo sapiens.
XX PN WO9942581-A1.
XX PD 26-AUG-1999.
XX PF 19-FEB-1999; 99WO-US032273.
XX PR 19-FEB-1998; 98US-0075079.
XX PA (EVIR-) EASTERN VIRGINIA MEDICAL SCHOOL.
XX PI Dong K, Gibbons WE, Oehninger S;
XX DR WPI; 1999-527476/44.
XX PT New recombinant human zona pellucida protein 3 - used to develop
XX PT products for diagnostic and therapeutic use related to human
XX PT fertility
XX PS Claim 7; Fig 1; 35pp; English.

14

Sequence 41 AA;

1 SWEFVGGPADTCOCCKNGDGGTPSHSRROPHVMSQWSRSVS 411

U
E
E

AA52988

14-FEB-2000 (first entry)

Human zona pellucida ZPC protein sequence.

Zona pellucida; ZPA; ZPB; ZPC; infertility; sterility; vaccine;
immunisation; immunisation.
contraception; immunisation.

Homo sapiens.

US5976545-A
02-NOV-1999.

07-JUN-1995; 9505-0484158.

09-NOV-1993; 93US-0149223.
09-NOV-1992; 92US-0973341.

(ZONA-) ZONAGEN INC.

Podolski JS, Hsu KT, Harris JD,

WPI; 2000-037080/03.
N-PSDB; AAZ33285.

New recombinant mammalian zona pellucida C proteins, for induction of female sterility -

Disclosure; Column 153-156; 87pp; English.

The present invention describes recombinant zona pellucida (ZP) proteins, specifically ZP3 proteins. Also described are fusion

proteins, specifically are present in these organisms. ZPC with any of keyhole limpet haemocyanin, muramyI dipeptide, histidine tag, beta-galactosidase or palmitic acid, capable of

stimulating mammalian antibodies that recognise mammalian ZPC. Recombinant ZPC proteins are used to immunise animals to induce trans-

infertility or permanent female sterility, in humans or other mammals. AAZ33243 (ex-AAZ33354, AAZ33270 to AAZ33274 and AAZ33285 encode mammalian

2P proteins given in AA552971 to AA552988 from the present invention. AA553255 to AA553269 and AA553275 to AA553284 represent oligonucleotides

Sequence	424 AA;
...	...
SQ	

Best Local Similarity	95.1%	Freq. no.: 7,000	27
Matches	39;	Conservative	1;
		Mismatches	1;
		Indels	0;
		Gaps	0;

Db 308 swfpvegpadlcqccnkgydcgltprhsrrqphvmqwsrsas 348

RESULT 3
AAV67287 standard: Protein: 372 AA

XX
AC
AA67287;

05-APR-2000 (first entry)

Zona pellucida protein; ZP3; sperm receptor; fertilisation; antiserum,

KW sperm receptor; antigenic molecule;
KW sterilisation; fertility modulation.

OS Homo sapiens.
XX

PN	W09985520-AL
XX	
PD	23-DEC-1999

XX 18-JUN-1999; 99WO-US13858.
PF

19-JUN-1998; 98US-0089950.

PA (Uyvl-) ONIV VIRGINIA
XX
BT HERR JC. COOPROD SA:

XX WPI; 2000-106016/
DR 1-17700

Antigenic molecule used in method
PT
XX
DA

XX Claim 6; Fig 12B; 103pp; English.
PS
YY

CC This is the amino acid sequence of the human zona pellucida protein,
CC This is the amino acid sequence of the human zona pellucida protein,
CC (23). ZP3 takes part in the primary binding between egg and sperm,
CC (23). ZP3 takes part in the primary binding between egg and sperm, the ZP3
CC binds to receptors on the sperm. The ZP3

protein is used in the invention, which relates to an antigenic molecule which consists of an isolated egg surface protein (e.g. ZP3) covalently linked to a carrier protein. CC

CC linked to a glycosylated phosphatidyl inositol moiety.
CC binding activity. Antiserum comprising an egg surface
CC protein can be prepared by recovering serum with the ability to bind

CC antigen from an animal following immunisation with an immunogenic CC fragment of an egg surface protein. The antigenic molecule the antiserum

modulating fertility. The antibodies can be used in vaccination and in antibody diagnosis. The antibodies can be used in vaccination and in antibody diagnosis. The antibodies can be used in vaccination and in antibody diagnosis.

Immunotherapy and generation of antitubercular antibodies

Sequence 372 AA;
SQ

Query Match	94.68;	Score 229;	DB 21;	Length 372;
-------------	--------	------------	--------	-------------

	92.7%	Indels	0;
Best Local Similarity		Gaps	0;
Matches	38; Conservative	Mismatches	2;

QY 1 SMFPVQGPADICQCCNKRGDCGTPSHSRKROPHVMSQMSKSVS 41
|||||:|||||


```

X 07-JUN-1995; 95US-0484993.
X
X 09-NOV-1993; 93US-0149223.
X 09-NOV-1992; 92US-0973341.
X 29-JAN-1993; 93US-0012990.
X 07-JUN-1995; 95US-0484993.
X
X (ZONA-) ZONAGEN INC.
X
X Harris JD;
X
X WPI: 1999-023447/02.
X N-PSDB; AA064820.
X
X Isolated zona pellucida DNA from different mammals - used to develop
X products which can be used for vaccination to induce transient
X infertility or permanent sterility in female mammals
X
X Example 12; Column 145-148; 84pp; English.
X
X This sequence represents a Macaca cynomolgus ZPC protein isolated from
X zona pellucida. This protein can be used in a method for specifically
X inducing transient infertility or permanent sterility in a host
X animal by selective vaccination with specific zona pellucida proteins
X or immunosuppressively active fragments.
X
X Sequence 223 AA;
X
X
X Query Match 93.4%; Score 226; DB 20; Length 223;
X Best Local Similarity 90.2%; Pred. No. 5.1e-20;
X Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
X
X 1 SWFVQGPADICQCCNKGDGTPSHSRQPHVMSQMSRSVS 41
X |||||:|||||:|||||:|||||:|||||:|||||:
X 107 swfvegpadiqccksgkdcgtpshsrqphvmsqwsrsas 147
X
X
X RESULT 7
X ID AAY82218 standard; Protein; 223 AA.
X AC AAY82218;
X DT 12-JUN-2000 (first entry)
X DE Monkey zona pellucida ZPC SEQ ID NO:49.
X KW zona pellucida; ZPA; ZPB; ZPC; infertility; permanent sterility;
X vaccine; immunosuppressive; contraceptive; immunostimulatory.
X OS Primate.
X PN US6027727-A.
X PD 22-FEB-2000.
X PF 09-NOV-1993; 93US-0149223.
X PR 09-NOV-1992; 92US-0973341.
X PR 29-JAN-1993; 93US-0012990.
X PA (ZONA-) ZONAGEN INC.
X PI Podolski JS, Hsu KT, Harris JD;
X DR N-PSDB; AA295677.
X WPI: 2000-269144/23.
X Inducing reproducible transient or permanent infertility in a mammal
X comprises administration of homologous and/or heterologous mammalian
X species zona pellucida proteins

```

```

XX Example 12; Column 147-148; 85pp; English.
XX
XX The present invention describes a method for inducing reproducible
XX transient infertility in a female mammal, including humans, by selective
XX administration of homologous and/or heterologous mammalian species
XX zona pellucida (ZP) proteins or immunosuppressively active fragments.
XX Also described are: (1) a method for inducing transient infertility in a
XX mammal by administering directly an antibody directed to a ZP or an
XX immunologically active fragment selected from feline, bovine,
XX cynomolgus monkey or human ZP polypeptides; (2) an isolated, purified
XX recombinant feline, bovine, cynomolgus monkey or human ZP polypeptide
XX or immunologically active fragment; and (3) a fusion protein comprising
XX a ZP polypeptide which is conjugated with a compound selected from
XX keyhole limpet haemocyanin, muramyl dipeptide, histidine-tag, beta-gal,
XX or palmitic acid where the fusion protein remains effective to stimulate
XX production of antibodies that recognise a ZP polypeptide. The method is
XX useful for providing transient or permanent infertility or sterility in
XX humans and animals. The present sequence represents monkey ZPC, which is
XX used in the exemplification of the present invention.
XX
XX Sequence 223 AA;
XX
XX
XX Query Match 93.4%; Score 226; DB 21; Length 223;
XX Best Local Similarity 90.2%; Pred. No. 5.1e-20;
XX Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
XX
XX 1 SWFVQGPADICQCCNKGDGTPSHSRQPHVMSQMSRSVS 41
XX |||||:|||||:|||||:|||||:|||||:|||||:
XX 107 swfvegpadiqccksgkdcgtpshsrqphvmsqwsrsas 147
XX
XX
XX RESULT 8
XX ID AAY52692 standard; Protein; 223 AA.
XX AC AAY52692;
XX DT 14-MAR-2000 (first entry)
XX DE Cynomolgus monkey oocyte zona pellucida protein ZPC.
XX KW zona pellucida; ZPA; ZPB; ZPC; purified; mammalian; glycoprotein;
XX target; immunosuppression; vaccine; antibody; transient; infertility;
XX controllable; predictable; permanent; sterility; side effect.
XX OS Macaca cynomolgus.
XX PN US6001599-A.
XX PD 14-DEC-1999.
XX PF 02-JUN-1995; 95US-0458731.
XX PR 09-NOV-1993; 93US-0149223.
XX PR 09-NOV-1992; 92US-0973341.
XX PR 29-JAN-1993; 93US-0012990.
XX PA (ZONA-) ZONAGEN INC.
XX PI Podolski JS, Hsu KT, Harris JD;
XX DR WPI: 2000-061880/05.
XX Induced DNA encoding mammalian zona pellucida proteins useful for
XX inducing transient sterility -
XX Example 12; Columns 145-146; 84pp; English.
XX
XX This sequence represents a mammalian zona pellucida protein, ZPC.
XX The zona pellucida is a complex matrix surrounding the mammalian
XX oocyte, formed of glycoproteins secreted by ovarian cells. The

```

CC invention relates to zona pellucida proteins ZPA, ZPB and ZPC, which
CC are useful as targets for immunocontraceptive vaccines. Polynucleotides
CC encoding these proteins can be used for recombinant protein production,
CC and as probes in hybridisation methods for the isolation of
CC polynucleotides encoding zona pellucida proteins from other mammalian
CC species. Administration of zona pellucida proteins to a host animal
CC results in a specific immunocontraceptive effect. Administration of
CC purified ZPA and/or ZPB induces transient infertility in females.
CC Fertility can be maintained in an on or off condition in a controllable/
CC predictable fashion. Administration of ZPC induces permanent sterility.
CC Use of a purified zona pellucida protein rather than a complex mixture
CC of zona pellucida proteins reduces the potential for unwanted side-
CC effects which may be harmful.

SC Sequence 223 AA:

Query Match 93.4%; Score 226; DB 21; Length 223;
Best Local Similarity 90.2%; Pred. No. 5.1e-20;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWFPVGGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41
DB 107 swfpvgpadicqcskgydcgtpshsrqphvmsqwsrsas 147

RESULT 9

AAV52183
ID AAV52183 standard; Protein; 223 AA.

AC AAV52183;

DT 09-FEB-2000 (first entry)

DE Monkey zona pellucida protein C (ZPC) amino acid sequence.

XX Zona pellucida protein; ZPA; ZPB; ZPC; oocyte; ovarian cell; antibody;
KM fusion protein; vaccine; contraceptive; fertilization; fertility;
KW immunocontraceptive.

OS Macaca cynomolgus.

PN US989550-A.

PD 23-NOV-1999.

PF 07-JUN-1995; 950S-0480150.

PR 09-NOV-1993; 930S-0149223.

PR 09-NOV-1992; 920S-0973341.

PR 29-JAN-1993; 930S-0012990.

XX (ZONA-) ZONAGEN INC.

PI Podolski JS, Hsu KT, Harris JD;

DR WPI: 2000-022762/02.

DR N-PSDB; AA237824.

XX Isolated and purified mammalian zona pellucida proteins useful in
XX methods of immunocontraception -

XX Example 12; Column 145-146; 84pp; English.

CC Sequences AAV52181-Y52183 are monkey zona pellucida proteins ZPA, ZPB,
CC and ZPC. The invention relates to isolated and purified zona pellucida
CC proteins from mammals, specifically canine, feline and bovine ZPA or
CC their biologically active fragments also porcine and cynomolgus monkey
CC proteins. The zona pellucida is a complex matrix surrounding the mammalian
CC oocyte, formed of glycoproteins secreted by ovarian cells. The
CC proteins, especially mentioned ZPA proteins can be used to produce a fusion
CC protein that stimulate production of antibodies in a mammal that recognize
CC a peptide of the mammal. The ZPA polypeptides are useful as

CC vaccines for selectively effecting transient infertility in mammals. ZP
CC has an important role in maintaining the oocyte and in oocyte-sperm
CC interactions and so is a target for a contraceptive agent which
CC interferes with the fertilization process. Providing a specific
CC polypeptide reduces the need for a complex mixture of many ZP proteins
CC which may create unwanted and harmful side effects. The duration of
CC transient fertility is controllable and can be maintained in a
CC controllable and/or predictable fashion.

SC Sequence 223 AA:

Query Match 93.4%; Score 226; DB 21; Length 223;
Best Local Similarity 90.2%; Pred. No. 5.1e-20;
Matches 37; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 1 SWFPVGGPADICCCCKNGDCGTPSHSRQPHVMSQMSRSVS 41
DB 107 swfpvgpadicqcskgydcgtpshsrqphvmsqwsrsas 147

RESULT 10

AAV52987
ID AAV52987 standard; Protein; 223 AA.

AC AAV52987;

DT 14-FEB-2000 (first entry)

DE Cynomolgus monkey zona pellucida ZPC protein sequence.

XX Zona pellucida; ZPA; ZPB; ZPC; infertility; sterility; vaccine;
KW immunocontraceptive; contraception; immunisation.

OS Mammalia.

PN US976545-A.

PD 02-NOV-1999.

PF 07-JUN-1995; 950S-0484158.

PR 09-NOV-1993; 930S-0149223.

PR 09-NOV-1992; 920S-0973341.

PR 29-JAN-1993; 930S-0012990.

XX (ZONA-) ZONAGEN INC.

PI Podolski JS, Hsu KT, Harris JD;

DR WPI: 2000-037080/03.

DR N-PSDB; AA233274.

XX New recombinant mammalian zona pellucida C proteins, for induction of
XX female sterility -

XX Claim 14; Column 145-146; 87pp; English.

CC The present invention describes recombinant zona pellucida (ZP)
CC proteins, specifically ZPC proteins. Also described are fusion proteins
CC of ZPC with any of keyhole limpet haemocyanin, muramyl dipeptide,
CC histidine tag, beta-galactosidase or palmitic acid, capable of
CC stimulating mammalian antibodies that recognise mammalian ZPC.
CC Recombinant ZPC proteins are used to immunise animals to induce transient
CC infertility or permanent female sterility, in humans or other mammals.
CC AA233243 to AA233254, AA233270 to AA233274 and AA233285 encode mammalian
CC ZP proteins given in AAV52971 to AAV52988 from the present invention.
CC AA233255 to AA233269 and AA233275 to AA233284 represent oligonucleotides
CC used in the exemplification of the present invention.

SC Sequence 223 AA:

ID AAR53498 Standard; Pilocaine, 42.4 mg.
 XX
 AC AAR53498;
 XX
 DT 02-NOV-1994 (first entry)
 XX
 DE Marmoset ZP3.
 XX

XX Callithrix juscus.

PN MO9410504 A.
XX

PD 11-MAY-1974.
XX

XX 22 OCT 1991 2000 00

XX
XX
XX

AA Aitken RJ, Koothan T:
PI

XX WPI; 1994-167461/20.
DR N-PSDB; AAQ63673.
DR
XX

PT	immuno-contraceptive vaccine
P1	New polypeptide(s) with main

PT
XX
XX
for contraceptive development

PS Claim 1, page 10, 2/11/11, English
XX

using PCR primers corresp. to regions of the human ZP3 gene.

diagnostic reagent e.g. to detect sperm function, to monitor the

CC effects of vaccination/ 202 2009 2009
CC autoimmune disorders or ZP3-expressing tumours or to screen for

XX	Sequence	424 AA;
50		

Query Match 79.3% Score 192; DB 15; Length 424;

Best Local Similarity	82.18;	Pred. NO. 1.00 100;							
Matches	32;	Conservative	4;	Mismatches	3;	Indels	0;	Gaps	0;

```
QY      1 SWEPVGGPADICCCCKNGDCGTFSPHSRRDPHYVNSQWSRS   39  
        |||||::|||||:::|||||:::|||||::|||  
Db     308 swtfvpgpadicqcskskgdcgftpsrharrqpghvsllsgs   346
```

RESULT 13

AAR55199

ID AAR55199 standard; Protein, 426 AA.

XX

AC AAR55199;

XX
DT 31-JAN-1995 (first entry)

DE	Canine zona pellucida ZPC protein.
XX	
KW	Dog; canine; zona pellucida; ZPC; immunocontraception
XX	

OS	Canis familiaris.	
XX.		
FH	key	location/qualifiers
FM	protein	1-426

AA W09411019-A.
PN

QY 1 SWEPPVGGPADICCCCKNGDGTPSHRQPHVMSQMSRS 39
 |||||:|||||:|||||:|||||:| |
 Db 308 swfvevgpadicgcckgdcgfpsharrqphvmslsgs 346

RESULT 13

ID AAR55199 standard; Protein; 426 AA.

AC AAR55199;

DT 31-JAN-1995 (first entry)

Canine zona pellucida ZPC protein.

Dog; canine; zona pellucida; ZPC; immunoneutralization

OS *Canis familiaris.*

Key	Location/Qualifiers
FH	

```

FT      /label= canine_zpc

```

PN WO9411019-A.

QY 1 SWEPPVGGPADICCCCKNGDGTPSHRQPHVMSQMSRS 39
 |||||:|||||:|||||:|||||:| |
 Db 308 swfvevgsppadlcgcscgydcgfpsharrqphvvsjsgs 346

RESULT 13

ID AAR55199 standard; Protein; 426 AA.

AC AAR55199;

DT 31-JAN-1995 (first entry)

Canine zona pellucida ZPC protein.

Dog; canine; zona pellucida; ZPC; immunoneutralization

OS *Canis familiaris.*

Key	Location/Qualifiers
FH	

```

FT      /label= canine_zpc

```

PN WO9411019-A.

```

XX Mammalian zona pellucida proteins used to induce transient or permanent
PT infertility -
XX
PS Example 3; Column 73-76; 84pp; English.
XX
CC This sequence represents the canine zona pellucida ZPC protein. The
CC invention relates to the isolation of novel nucleotide sequences encoding
CC zona pellucida proteins from mammalian, especially porcine, lapine,
CC canine, feline, bovine, human or cynomolgus monkey sources. The zona
CC pellucida proteins (ZPA, ZPB, and ZPC) are used in the induction of
CC transient or permanent infertility. At present the method is used in
CC veterinary applications to induce transient or permanent infertility
CC in porcine, lapine, canine, feline, bovine, and cynomolgus monkeys.
XX
SQ Sequence 426 AA;

```

[illegible]

RESULT	15
AAW81809	
ID	AAW81809 standard; Protein; 426 AA.
XX	
AC	AAW81809;
XX	
DT	29-JAN-1999 (first entry)
XX	
DE	Canine ZPC protein.
XX	
KW	ZPC; zona pellucida; infertility; sterility; immunocontraceptive;
KW	vaccine; canine.
XX	
OS	Canis sp.
XX	
PN	US5837497-A.
XX	
PD	17-NOV-1998.
XX	
PF	07-JUN-1995; 95US-0484993.
XX	
PR	09-NOV-1993; 93US-0149223.
PR	09-NOV-1992; 92US-0973341.
PR	29-JAN-1993; 93US-0012990.
PR	07-JUN-1995; 95US-0484993.
XX	
PA	(ZONA-) ZONAGEN INC.
XX	
PI	Harris JD;
XX	
DR	WPI; 1999-023447/02.
DR	N-PSDB; AAV64791.
XX	
PT	Isolated zona pellucida DNA from different mammals - used to develop
PT	products which can be used for vaccination to induce transient
PT	infertility or permanent sterility in female mammals
XX	
PS	Claim 5; Column 78-80; 84pp; English.
XX	
CC	This sequence represents a canine ZPC protein isolated from zona
CC	pellucida. This protein can be used in a method for specifically
CC	inducing transient infertility or permanent sterility in a host
CC	animal by selective vaccination with specific zona pellucida proteins
CC	or immunocontraceptively active fragments.
XX	
SQ	Sequence 426 AA;

